

Operating Instructions

DVD Home Theater Sound System

Model No. **SC-HT335**

*Advanced
progressive scan* page **6**
Provides a smoother and sharper image.

*Compatible with a variety of
media formats* page **9**
DVD-RAM, DVD-Audio, DVD-Video, DivX and more.

Region number

The player plays DVD-Video marked with labels containing the region number "2" or "ALL".

Example:



*High performance
sound effects* page **22**
Sound field control (SFC), Dolby Pro Logic II and more.

Before connecting, operating or adjusting this product,
please read the instructions completely.
Please keep this manual for future reference.

Dear customer

Thank you for purchasing this product. For optimum performance and safety, please read these instructions carefully.

Operations in these instructions are described mainly with the remote control, but you can perform the operations on the main unit if the controls are the same.

System	SC-HT335
Main unit	SA-HT335
Front speakers	SB-FS335
Center speaker	SB-PC335
Surround speakers	SB-FS335
Subwoofer	SB-W335

CAUTION!

THIS PRODUCT UTILIZES A LASER. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE. DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

CAUTION!

- DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.
- DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.
- DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.
- DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.

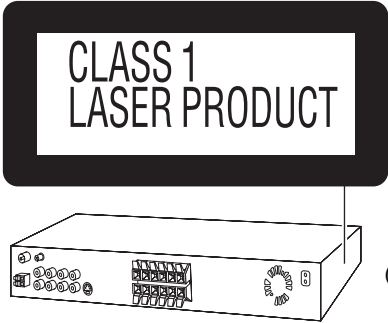
This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

THIS UNIT IS INTENDED FOR USE IN TROPICAL CLIMATES.

CAUTION	- LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM. FDA 21 CFR / Class II
CAUTION	- VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. IEC60825-1 / Class 3b
WARNING	- SYNLIG OG USYNLIG LASERSTRÅLING NÅR DENNA DEL ÅR ÖPPNAD. BETRÄKTA EJ STRÅLEN.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
ADVARSEL	- SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VARO!	- AVATTAESSA OLET ALTTIIN NÄKYVÄÄ JA NÄKYMÄTÖN LASERSTRÄLYLLÄ. ÄLÄ KATSO SÄTEESEEN.
VORSICHT	- SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG. WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
ATTENTION	- RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
注意	- 打開時有可見及不可見激光輻射。避免激光照射。
注意	- ここを開くと可視及び不可視レーザー光が出ます。ビームを見たり、触れたりしないで下さい。 ROLYS2054

(Inside of product)



(Side of product)

-If you see this symbol-

Information on Disposal in other Countries outside the European Union



This symbol is only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.

Safety precautions

Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life. Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire. Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other places where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead. Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock. Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction. Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer. Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

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Glossary

Decoder

A decoder restores the coded audio signals on DVD's to normal. This is called decoding.

DivX

A video compression format developed by DivXNetworks, Inc. that compresses video files without any considerable loss of video quality.

Dolby Digital

This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.

DTS (Digital Theater Systems)

This surround system is used in many movie theaters around the world. There is good separation between the channels, so realistic sound effects are possible.

Dynamic range

Dynamic range is the difference between the lowest level of sound that can be heard above the noise of the equipment and the highest level of sound before distortion occurs.

Frame still and field still

Frames are the still pictures that go together to make a moving picture. There are about 30 frames shown each second. One frame is made up of two fields. A regular television shows these fields one after the other to create frames. A still is shown when you pause a moving picture. A frame still is made up of two alternating fields, so the picture may appear blurred, but overall quality is high. A field still is not blurred, but it has only half the information of a frame still so picture quality is lower.

I/P/B

MPEG 2, the video compression standard adopted for use with DVD-Video, codes frames using these 3 picture types.

I: Intra coded picture

This picture has the best quality and is the best to use when adjusting the picture.

P: Predictive coded picture

This picture is calculated based on past I or P-pictures.

B: Bidirectionally-predictive coded picture

This picture is calculated by comparing past and future I and P-pictures so it has the lowest volume of information.

Linear PCM (pulse code modulation)

These are uncompressed digital signals, similar to those found on CDs.

MPEG4

A compression system for use on mobile devices or a network, that allows highly efficient recording at a low bit rate.

Playback control (PBC)

If a Video CD has playback control, you can select scenes and information with menus.

Sampling frequency

Sampling is the process of converting the heights of sound wave (analog signal) samples taken at set periods into digits (digital encoding). Sampling frequency is the number of samples taken per second, so larger numbers mean more faithful reproduction of the original sound.

Simple setup

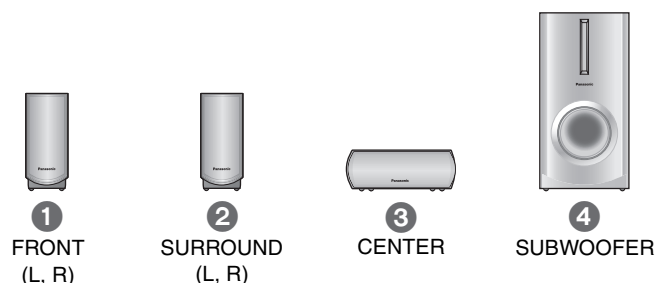
STEP 1 Positioning

How you set up your speakers can affect the bass and the sound field. Note the following points:

- Place speakers on flat secure bases.
- Placing speakers too close to floors, walls, and corners can result in excessive bass. Cover walls and windows with thick curtains.
- Place the front, center, and surround speakers at approximately the same distance from the seating position.

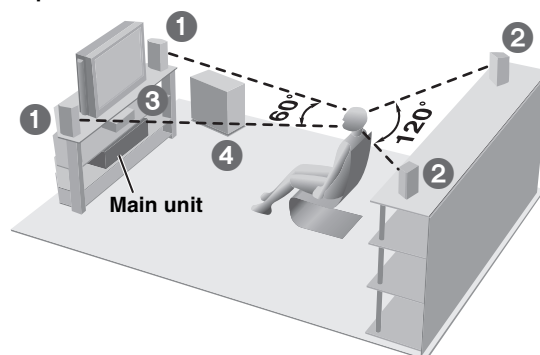
The angles in the diagram are approximate.

Other speaker setup options (→ page 26)



- The four front and surround speakers are the same.

Setup example



• Use only supplied speakers

Using other speakers can damage the unit, and sound quality will be negatively affected.

- Set the speakers up on an even surface to prevent them from falling. Take proper precautions to prevent the speakers from falling if you cannot set them up on an even surface.

Main unit

Note

Keep your speakers at least 10 mm away from the system for proper ventilation.

Center speaker

- Vibration caused by the center speaker can disrupt the picture if it is placed directly on the television. Put the center speaker on a rack or shelf.
- To prevent the speakers from falling, do not place directly on top of the television.

Subwoofer

Place to the right or left of the television, on the floor or a sturdy shelf so that it won't cause vibration. Leave 10 cm at the rear for ventilation.

Notes on speaker use

- You can damage your speakers and shorten their useful life if you play sound at high levels over extended periods.
- Reduce the volume in the following cases to avoid damage:
 - When playing distorted sound.
 - When the speakers are reverberating due to a record player, a microphone, noise from FM broadcasts, continuous signals from an oscillator, test disc, or electronic instrument.
 - When adjusting the sound quality.
 - When turning the unit on or off.

If irregular coloring occurs on your television

The supplied speakers are designed to be used close to a television, but the picture may be affected with some televisions and setup combinations.

If this occurs, turn the television off for about 30 minutes.

The television's demagnetizing function should correct the problem. If it persists, move the speakers farther away from the television.

Caution

- The main unit and supplied speakers are to be used only as indicated in this setup. Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire. Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.
- Do not attempt to attach these speakers to walls using methods other than those described in this manual.

STEP 2 Speaker connections

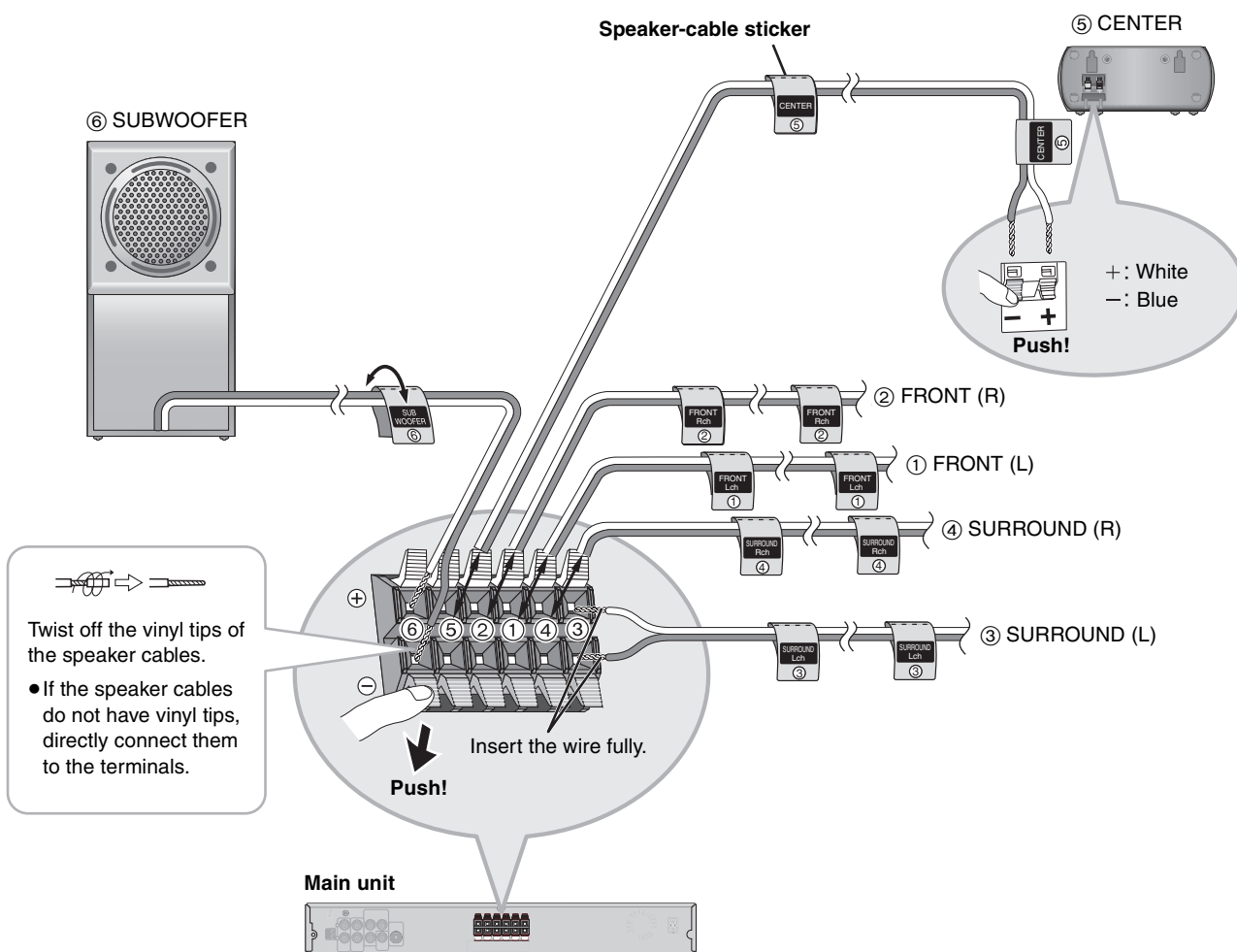
Attach the speaker-cable stickers to make connection easier.

Speaker cables

- 3× short cables: For front and center speakers
- 2× long cables: For surround speakers



2 Sheets of speaker-cable stickers



Note

- Never short-circuit positive (+) and negative (–) speaker wires.
- Be sure to connect only positive (white) wires to positive (+) terminals and negative (blue) wires to negative (–) terminals. Incorrect connection can damage the speakers.

STEP 3 Video connections

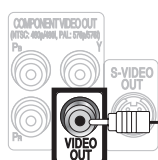
Video cable



- Do not connect through the video cassette recorder.
Due to copy guard protection, the picture may not be displayed properly.
- Turn the television off before connecting, and refer to the television's operating instructions.

■ Television with a VIDEO IN terminal

Back of the main unit



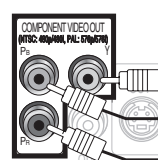
Video cable
(included)

Television
(not included)



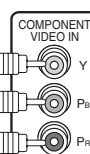
■ Television with COMPONENT VIDEO IN terminals

Back of the main unit



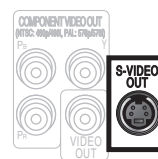
Video cables
(not included)

Television
(not included)



■ Television with an S-VIDEO IN terminal

Back of the main unit



S-video cable
(not included)

Television
(not included)



COMPONENT VIDEO OUT terminals

These terminals can be used for either interlace or progressive output and provide a purer picture than the S-VIDEO OUT terminal. Connection using these terminals outputs the color difference signals (P_B/P_R) and luminance signal (Y) separately in order to achieve high fidelity in reproducing colors.

- The description of the component video input terminals depends on the television or monitor (e.g. Y/P_B/P_R, Y/B-Y/R-Y, Y/C_B/C_R). Connect to terminals of the same color.

To enjoy progressive video

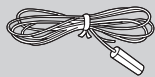
Connect to the component video input terminals on a 625p (or 576p) or 525p (or 480p) compatible television. (Video will not be displayed correctly if connected to an incompatible television.)

S-VIDEO OUT terminal

The S-VIDEO OUT terminal achieves a more vivid picture than the VIDEO OUT terminal by separating the chrominance (C) and luminance (Y) signals. (Actual results depend on the television.)

STEP 4 Antennas and AC mains lead

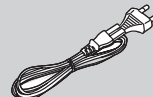
FM indoor antenna



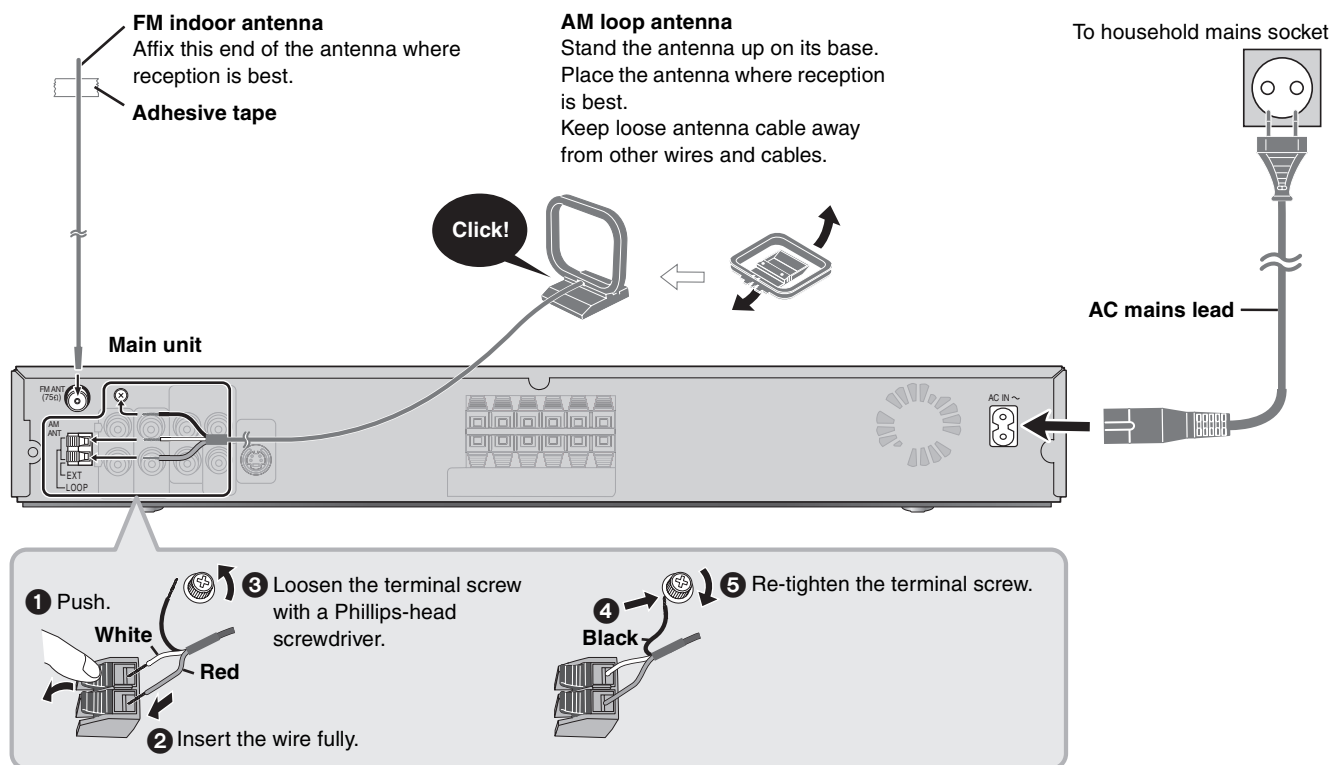
AM loop antenna



AC mains lead



- Connect the AC mains lead after all other connections are complete.
- Optional antenna connections (→ page 21).



Conserving power

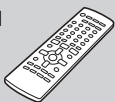
The main unit consumes a small amount of power, even when it is turned off (approx. 0.5 W). To save power when the unit is not to be used for a long time, unplug it from the household mains socket. You will need to reset some memory items after plugging in the unit.

Note

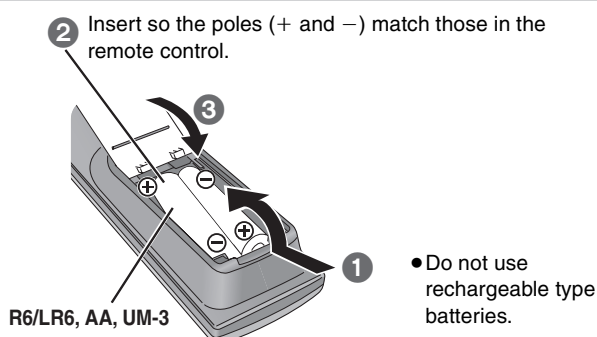
The included AC mains lead is for use with this unit only. Do not use it with other equipment.

STEP 5 The remote control

Remote control



Batteries



Do not:

- mix old and new batteries.
 - use different types at the same time.
 - heat or expose to flame.
 - take apart or short circuit.
 - attempt to recharge alkaline or manganese batteries.
 - use batteries if the covering has been peeled off.
- Mishandling of batteries can cause electrolyte leakage which can damage items the fluid contacts and may cause a fire.

Remove if the remote control is not going to be used for a long period of time. Store in a cool, dark place.

Use

Aim at the display (→ page 8), avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

STEP 6 QUICK SETUP

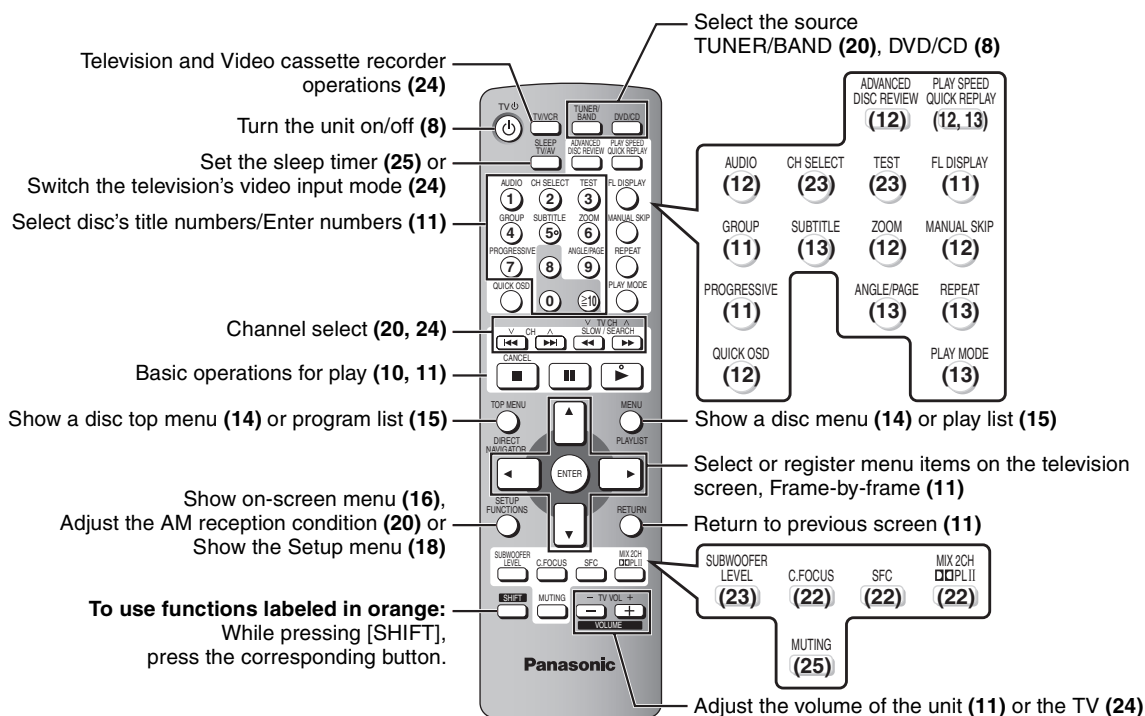
The **QUICK SETUP** screen assists you to make necessary settings.
Turn on the television and select the appropriate video input on the television.

1	2	3	4	5	6
		+			+
Turn on the unit.	Select "DVD/CD".	Show the QUICK SETUP screen.	Follow the messages and make the settings.	Press to finish QUICK SETUP .	Press to exit.

To change these settings later
Select "QUICK SETUP" in the "Others" tab (→ page 19).

Control reference guide

See reference pages in brackets.



⏮/⏪, ⏩/⏭/⏹ TUNING **⏶**
Skipping or slow-search play (10)/
Select the radio stations (20)

⏏/⏏ OPEN/CLOSE
Open/Close the disc tray (10)

■/TUNE MODE

Stop playing (10)/Select the tuning mode (20)

⏸/FM MODE

Pause (10)/Adjust the FM reception condition (20)

▶/MEMORY

Play discs (10)/Memorize the receiving radio stations (20)



INPUT SELECTOR (20)
DVD/CD→FM→AM→TV→VCR→
Return to DVD/CD

AC supply indicator [AC IN]
This indicator lights when the unit is connected to the
AC mains supply.

Standby/on switch [⏻/⏻]

Press to switch the unit from on to standby mode or vice versa.

In standby mode, the unit is still consuming a small amount of power. (10)










MIC jack
Connect a microphone (25)

MIC LEVEL
Adjust microphone volume (25)

VOLUME
Turn up/down the volume (10)

PHONES
Connect headphones (25)

Discs that can be played

Disc	Logo	Indication in these operating instructions	Remarks
DVD-RAM		RAM	Recorded with devices using Version 1.1 of the Video Recording Format (a unified video recording standard), such as DVD video recorders, DVD video cameras, personal computers, etc.
		JPEG	Recorded with the Panasonic SD multi cameras or DVD video recorders using the DCF (Design rule for Camera File system) Standard Version 1.0.
		MPEG4	Recorded with the Panasonic SD multi cameras or DVD video recorders [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system].
		DivX ^{※1}	—
DVD-Audio		DVD-A	—
		DVD-V	Some DVD-Audio discs contain DVD-Video content. To play DVD-Video content, select “Play as DVD-Video” in Other Menu (→ page 17).
DVD-Video		DVD-V	—
DVD-R (DVD-Video)/ DVD-RW (DVD-Video)			Discs recorded and finalized ^{※2} on DVD video recorders or DVD video cameras.
+R (Video)/ +RW (Video)	—		Discs recorded and finalized ^{※2} on DVD video recorders or DVD video cameras.
DVD-R (DivX Video)/ DVD-RW (DivX Video)		DivX ^{※1}	Finalize ^{※2} the disc after recording.
DVD-RW (DVD-VR)		DVD-RW (VR)	Discs recorded and finalized ^{※2} on DVD video recorders or DVD video cameras using Version 1.1 of the Video Recording Format (a unified video recording standard).
Video CD		VCD	—
SVCD			Conforming to IEC62107
CD		CD	This unit is compatible with HDCD, but does not support the Peak Extend function (a function which expands the dynamic range of high level signals). HDCD-encoded CD's sound better because they are encoded with 20 bits, as compared with 16 bits for all other CD's.
CD-R CD-RW	—	WMA MP3 JPEG CD MPEG4 DivX ^{※1} VCD	<ul style="list-style-type: none"> • This unit can play CD-R/RW (audio recording disc) recorded with the formats on the left. Close the sessions or finalize^{※2} the disc after recording. • HighMAT discs WMA, MP3 or JPEG files only. To play without using the HighMAT function, select “Play as Data Disc” in Other Menu (→ page 17). • WMA This unit does not support Multiple Bit Rate (MBR: a file that contains the same content encoded at several different bit rates).

^{※1} Created using DivX ver.3.11, 4.x, 5.x [DivX video system/MP3, Dolby Digital or MPEG audio system].

^{※2} A process that allows play on compatible equipment.

• It may not be possible to play the above discs in all cases due to the type of discs, the condition of the recording, the recording method and how the files were created (→ page 15, Tips for making data discs).

■ Discs that cannot be played

Version 1.0 of DVD-RW, DVD-ROM, CD-ROM, CDV, CD-G, SACD and Photo CD, DVD-RAM that cannot be removed from their cartridge, 2.6-GB and 5.2-GB DVD-RAM and “Chaoji VCD” available on the market including CVD, DVCD and SVCD that do not conform to IEC62107.


■ Audio format of DVD's


This unit automatically recognizes and decodes discs with these symbols.




■ Video systems

- This unit can play PAL and NTSC, but your television must match the system used on the disc.
- PAL discs cannot be correctly viewed on an NTSC television.
- This unit can convert NTSC signals to PAL 60 for viewing on a PAL television (→ page 19, “NTSC Disc Output” in “Video” tab).

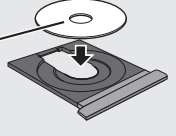
1 Turn the unit on. 

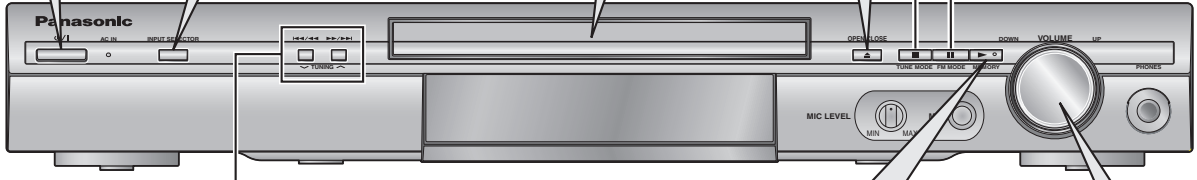
2 Select "DVD/CD".
INPUT SELECTOR 

3 Open the disc tray. 



4 Load the disc.



- Load double-sided discs so the label for the side you want to play is facing up.
- **RAM** Remove the disc from its cartridge before use.






Press to skip.
Press and hold to
 –**search** (during play)
 –**slow-motion** (during pause)
 (Motion picture part)
 • Press [▶] (play) to start normal play.


 

5 Start play.
The tray is automatically closed.



6 Adjust the volume.

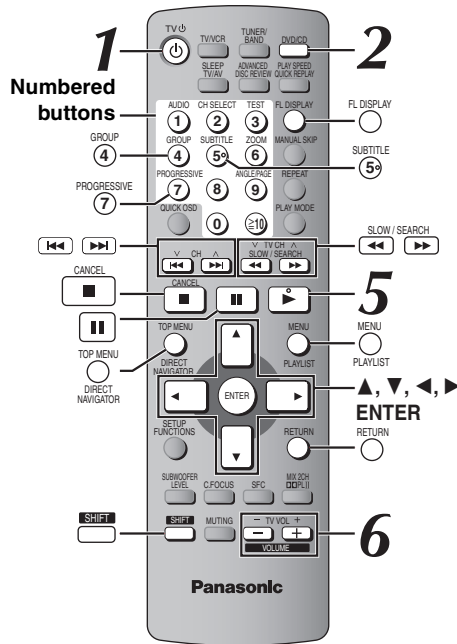
DOWN VOLUME UP



Note

- Discs continue to rotate while menus are displayed. Press [■] when you finish to preserve the unit's motor and your television screen.
- Total title number may not be displayed properly on +R/+RW.

Using the remote control



Stop



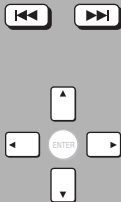
The position is memorized while "RESUME" is on the display.
 • Press [▶] (play) to resume.
 • Press [■] again to clear the position.

Pause



• Press [▶] (play) to restart play.

Skip



• **WMA** **MP3** **JPEG** **MPEG4** **DivX**
 [▲, ▼] : Group skip during play
 [◀, ▶] : Content skip during play

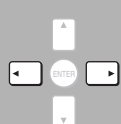
Search (during play)



Slow-motion (during pause)

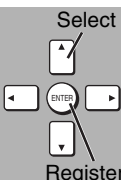
• Up to 5 steps.
 • Press [▶] (play) to start normal play.
 • **VCD** Slow-motion: forward direction only.
 • **MPEG4** **DivX** Slow-motion: Does not work.

Frame-by-frame (during pause)



DVD-A (Motion picture part)
RAM **DVD-RW (VR)** **DVD-V** **VCD**
 • **VCD** Forward direction only.

On-screen item select



Progressive Video



Enter number



RAM **DVD-RW (VR)** **DVD-A**
DVD-V **VCD** **CD**
 e.g. To select 12:
 [≥ 10] → [1] → [2]

VCD with playback control
 Press [■] to cancel the PBC function, and then press the numbered buttons.

WMA **MP3** **JPEG** **MPEG4** **DivX**
 e.g. To select 123:
 [1] → [2] → [3] → [ENTER]

• Press [SHIFT] + [CANCEL] to cancel the number(s).

Disc menu



DVD-A **DVD-V**
 Shows a disc top menu

RAM **DVD-RW (VR)**
 Shows the programs (→ page 15)



DVD-V
 Shows a disc menu

RAM **DVD-RW (VR)**
 Shows a play list (→ page 15)



VCD with playback control
 Shows a disc menu

Return to previous screen



Main unit display



RAM **DVD-RW (VR)** **DVD-A**
DVD-V **WMA** **MP3** **MPEG4** **DivX**
 Time display
 ↔ Information display

JPEG
 When Slideshow (→ page 16) is on:
 SLIDE ↔ Information display
 When Slideshow is off:
 PLAY ↔ Information display

Subtitles/ Information screen

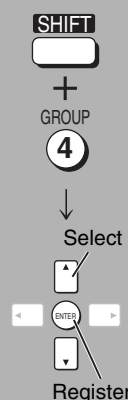


RAM **DVD-RW (VR)**
 Turns subtitle on/off (→ page 13)

DVD-V **DivX** **VCD** (SVCD only)
 Selects the subtitle languages (→ page 13)

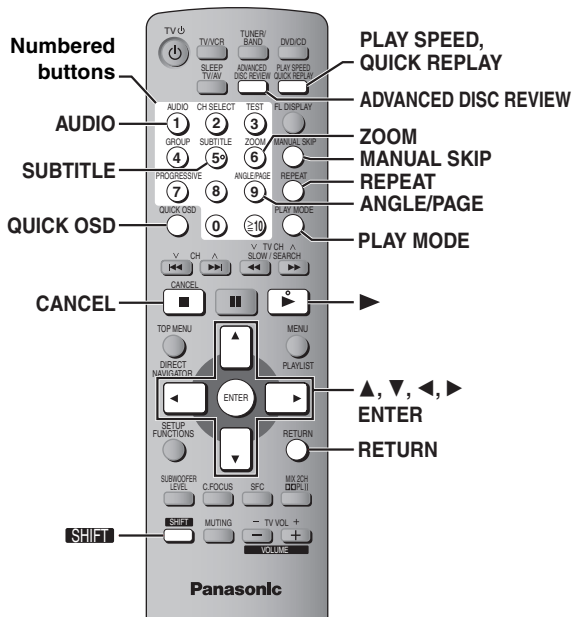
JPEG
 Date ↔ No information

Starting play from a selected group



DVD-A **WMA** **MP3** **JPEG** **MPEG4** **DivX**
 A folder on WMA/MP3, JPEG, MPEG4 and DivX video discs is treated as a "Group".

Convenient functions

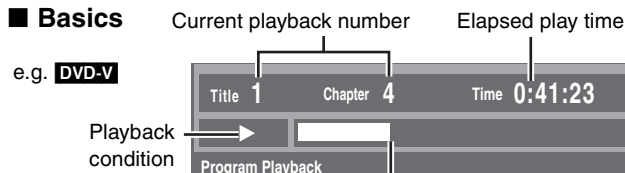


Displaying current playback condition (QUICK OSD)

Press **[QUICK OSD]**.

Basics → Details
Off

■ Basics



■ Details

e.g. DVD-V	Play mode or title of content	Current position
	Audio information	• Details-DVD-Video
	Subtitle information	Audio 1 --- DTS 3/2.1ch
	Angle information	Subtitle ---
	Aspect of current title	Angle 1/1
	Total play time of current title	Source Aspect 4:3
		Title Total Time 0:54:28

• **MPEG4** **DivX** Video and audio information is not displayed during search.

CD **MP3** **WMA** The QUICK OSD screen will appear automatically.

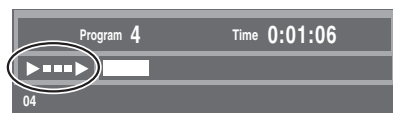
Reviewing titles to play (ADVANCED DISC REVIEW)

RAM **DVD-RW (VR)** (Except still picture part)
DVD-V (Except +R/+RW)

Allows you to browse the disc contents and start playing from the selected position. You can select either "Intro Mode" or "Interval Mode" in "Advanced Disc Review" in the "Disc" tab (→ page 18).

1 Press **[ADVANCED DISC REVIEW]**.
The QUICK OSD screen is displayed.

e.g. **RAM**



2 Press **[▶]** (play) when you find a title/program to play.

- This may not work depending on the disc and the play position.
- **RAM** **DVD-RW (VR)** This does not work when playing a play list (→ page 15).

Quick replay

(Only when the elapsed play time can be displayed.)
(Except **MPEG4** **DivX**, +R/+RW)

Press **[QUICK REPLAY]** to skip back a few seconds.

Skipping 30 seconds forward

(Only when the elapsed play time can be displayed.)

RAM **DVD-RW (VR)** **DVD-V** (Except +R/+RW)

Play restarts from approximately 30 seconds later. Convenient when you want to skip commercials etc.

During play

Press **[MANUAL SKIP]**.

RAM **DVD-RW (VR)** It is not possible to skip through the current program if the start of the next program is within about 30 seconds of the point you are skipping from.

Changing the zoom ratio

DVD-A (Motion picture part) **RAM** **DVD-RW (VR)** **DVD-V** **VCD** **MPEG4**

DivX

This feature expands the letterbox picture to fit the screen.

During play

Press **[SHIFT]**+**[ZOOM]** several times to select the preset aspect ratio (Just Fit Zoom) or "Auto".



DVD-A (Motion picture part) **RAM** **DVD-RW (VR)** **DVD-V** **VCD**

Auto → 4:3 Standard → European Vista → 16:9 Standard

↑
Cinemascope2 ← Cinemascope1 ← American Vista
e.g.



MPEG4 **DivX**

Standard (×0.25 full-screen) → Original (actual recorded size)
Full (full-screen)

- This may not work depending on the disc's recording.

Fine adjustments (Manual Zoom)

After selecting the preset aspect ratio or "Auto", press **[◀, ▶]**.

–from "×1.00" to "×1.60" (in 0.01 units)

–from "×1.60" to "×2.00" (in 0.02 units)

–from "×2.00" to "×4.00" (in 0.05 units) (**MPEG4** **DivX** only)

- It may not be possible to zoom up to "×4.00" depending upon the connected television and its settings.
- Press and hold **[◀, ▶]** to alter faster.

Changing soundtracks

DVD-A **DVD-V** **DivX** (with multiple soundtracks) **RAM** **DVD-RW (VR)** **VCD**

Press **[SHIFT]**+**[AUDIO]** several times to select the soundtrack. e.g. **DVD-V**

RAM **DVD-RW (VR)** **VCD**

You can use this button to select "L", "R" or "LR".

DivX

While the menu is displayed

Press **[◀, ▶]** to select "L", "R" or "LR".

DVD-V (Karaoke discs)

While the menu is displayed

Press **[◀, ▶]** to select "On" or "Off" for vocals.

Read the disc's instructions for details.

Signal type/data

LPCM/PPCM/□□ Digital/DTS/MPEG: Signal type

kHz (Sampling frequency)/bit/ch (Number of channels)

Example: 3/2.1ch

.1: Low frequency effect
(not displayed if there is no signal)

0: No surround

1: Mono surround

2: Stereo surround (left/right)

1: Center

2: Front left+Front right

3: Front left+Front right+Center

- **DivX** It may take some time for play to start if you change the audio on a DivX video disc.

Changing subtitles

DVD-V **DivX** (with multiple subtitles) **VCD** (SVCD only)

Press **[SHIFT]+[SUBTITLE]** several times to select the subtitle language.

- On + R/+RW, a subtitle number may be shown for subtitles that are not displayed.

To display/clear the subtitles

Press **[◀, ▶]** to select "On" or "Off".

RAM DVD-RW (VR) (On/Off only with discs that contain subtitle on/off information)

Press **[SHIFT]+[SUBTITLE]** to select "On" or "Off".

- Subtitle on/off information cannot be recorded using Panasonic DVD Recorders.



Angle selection and Still picture rotation/advance

Press **[SHIFT]+[ANGLE/PAGE]** several times to select the angle or rotate/advance the still picture.

DVD-V (with multiple angles)—Angle selection

JPEG—Still picture rotation

DVD-A—Still picture advance (Press **[RETURN]** to go back to page 1.)

Changing play speed

DVD-A (Motion picture part) **RAM DVD-RW (VR)** **DVD-V**

During play

Press **[SHIFT]+[PLAY SPEED]** several times to select "Normal", "Fast" or "Slow".



Changing play speed between the range of "×0.6" to "×1.4" (in 0.1 units)

Press **[◀, ▶]** while the above message is displayed.

- Press **[▶]** (play) to return to normal play.
- After you change the speed
 - Dolby Pro Logic II and Sound Enhancement do not work.
 - Audio output switches to 2ch.
 - Sampling frequency of 96 kHz is converted to 48 kHz.
- This function may not work depending on the disc's recording.

Repeat play

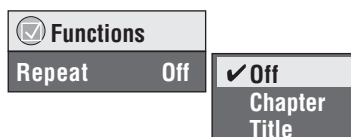
(Only when the elapsed play time can be displayed.)

JPEG: Works with all JPEG content.)

During play

Press **[REPEAT]** several times to select an item to be repeated.

e.g. **DVD-V**



RAM DVD-RW (VR): Program→All→Off

- During play list play: Scene→Playlist→Off

DVD-A: Track→Group*→Off

DVD-V: Chapter→Title*→Off

VCD **CD**: Track→All→Off

WMA MP3 MPEG4 DivX: Content→Group*→Off

JPEG: Group*→Off

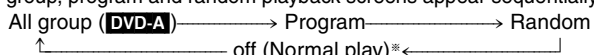
* "All" is displayed during all group (**DVD-A**), program and random play.

All group, Program and Random play

Except **RAM DVD-RW (VR)**

Press **[PLAY MODE]** while stopped.

All group, program and random playback screens appear sequentially.



*Select "off" condition to exit the all group, program or random mode.

- Disable HighMAT disc play to use random and program play. Select "Play as Data Disc" in Other Menu (→ page 17).
- DVD-A** Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numbered buttons to play the bonus group. Refer also to the disc's jacket.

All group play

DVD-A

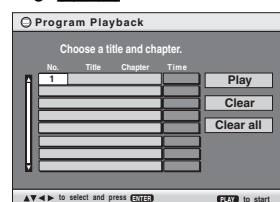
Press **[▶]** (play).



Program play (up to 32 items)

- Press the numbered buttons to select the items (**WMA MP3** **JPEG MPEG4 DivX**) then press **[ENTER]**.

e.g. **DVD-V**



- Repeat this step to program other items.

- To select a 2-digit number

e.g. To select 25: $[≥10] \rightarrow [2] \rightarrow [5]$

WMA MP3 JPEG MPEG4 DivX $[2] \rightarrow [5] \rightarrow [\text{ENTER}]$

- Press **[▶]** (play).

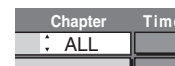
To select an item using the cursor buttons

Press **[ENTER]** and **[▲, ▼]** to select an item, then press **[ENTER]** again to register.

To select all the items

e.g. **DVD-V**

While the "Chapter", "Track" or "Content" field is highlighted, press **[▲, ▼]** to select "ALL". Then press **[ENTER]** again to register.



To change the selected program

- Press **[▲, ▼]** to select an item.
- Repeat step 1 above.

To clear the selected program

- Press **[▲, ▼]** to select an item.
- Press **[SHIFT]+[CANCEL]** (or press **[▲, ▼, ◀, ▶]** to select "Clear" and press **[ENTER]**).

To clear the whole program

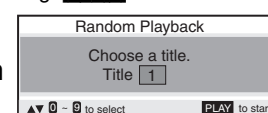
Press **[▲, ▼, ◀, ▶]** to select "Clear all" and press **[ENTER]**. The whole program is also cleared when the unit is turned off, the disc tray is opened or another source is selected.

Random play

- DVD-A DVD-V WMA MP3 JPEG MPEG4 DivX**

Press the numbered buttons to select a title or a group (**WMA MP3 JPEG MPEG4 DivX**) then press **[ENTER]**.

e.g. **DVD-V**

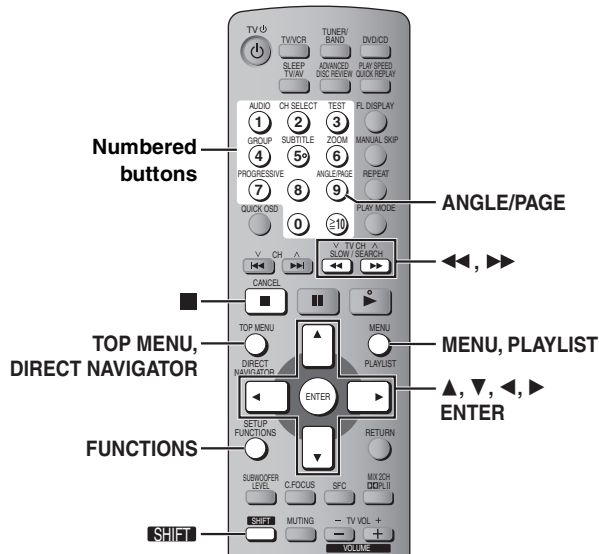


DVD-A

- To enter all groups, press **[◀, ▶]** to select "All" and press **[ENTER]**.
- To deselect a group, press the numbered buttons corresponding to the group you want to clear.

- Press **[▶]** (play).

Using navigation menus



You can play JPEG, MPEG4 and DivX video contents on DVD-RAM or play HighMAT discs without using the HighMAT function (→ page 17, "Play as Data Disc" in Other Menu).

- Playing HighMAT™ discs (→ page 15)

Playing items in order (Playback Menu)

1 Press [TOP MENU].

Items shown differ depending on the type of disc.

e.g.

All contents	All	Total 436
WMA/MP3	Audio	Total 7
JPEG	Picture	Total 427
MPEG4 and DivX video	Video	Total 2

- To exit the screen
Press [TOP MENU].

2 Press [▲, ▼] to select "All", "Audio", "Picture" or "Video" and press [ENTER].

Playing from the selected item (Navigation Menu)

1 Press [MENU].

2 Press [▲, ▼, ◀, ▶] to select the group and press [ENTER].

3 To play content in the group in order Press [ENTER].

To start play from the selected content
Press [▲, ▼] to select and [ENTER].

e.g.

Navigation Menu		Group and content number currently playing	
002 My favorite2/005 Japanese/001 Lady Starfish		JPEG	
Perfume	001 Lady Starfish ◀	WMA/MP3	
001 My favorite1	002 Metal Glue	MPEG4 and DivX video	
002 My favorite2	003 Life on Jupiter		
001 Brazilian	004 Starperson		
002 Chinese	005 Starperson		
003 Czech			
004 Hungarian			
005 Japanese			
006 Mexican			
007 Philippine			
008 Swedish			
009 Piano			
010 Vocal			
Group 005/023	Content 001/0005		
FUNCTIONS to display the sub menu	RETURN to exit		
Group	Content		

- Press [SHIFT]+[ANGLE/PAGE] to skip page by page in the group or content field.
- To enjoy listening to WMA/MP3 contents while showing a JPEG image on the screen
Select a JPEG file first, and then select audio contents. (The opposite order is not effective.)
- To exit the screen
Press [MENU].

Using the submenu

1 While the menu is displayed

Press [FUNCTIONS].

2 Press [▲, ▼] to select an item and press [ENTER].

Items shown differ depending on the disc contents.

Multi	Groups and contents are displayed.
List	Contents only
Tree	Groups only
Thumbnail	Thumbnail images [JPEG]
Next group	To go to next group
Previous group	To go to previous group
All	WMA/MP3, JPEG, MPEG4 and DivX video
Audio	WMA/MP3 only
Picture	JPEG only
Video	MPEG4 and DivX video only
Help display	To switch between guide messages and the elapsed play time indicator
Find	To search by content or group title (→ below)

Searching by a content or group title

Highlight a group title to search the group, or a content title to search its content.

1 While the submenu is displayed (→ above)

Press [▲, ▼] to select "Find" and press [ENTER].



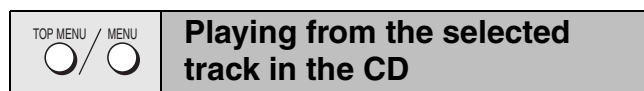
2 Press [▲, ▼] to select a character and press [ENTER].

- Repeat to enter another character.
- Lower case is also searched.
- Press [◀, ▶] to skip between A, E, I, O and U.
- Press [◀] to erase a character.
- Leave the asterisk (*) when you search for the titles including the character you enter.
- Erase the asterisk (*) to search for the titles starting with the character you enter. To add the asterisk (*) again, display the submenu again and select "Find".

3 Press [▶] to select "Find" and press [ENTER].

The search result screen appears.

4 Press [▲, ▼] to select the content or group and press [ENTER].



CD

Titles appear with CD Text disc playback.

1 Press [TOP MENU] or [MENU].

e.g. CD text

CD Text	
Disc Title: All By Artist	
Disc Artist: Pink Island	
Track Title: Long John Platinum	
Track Artist: SHIPWRECKED	
1. Ashley at Prom	
2. Cool Fungus	
3. Formula one	
4. Soccer	
5. Baseball	
6. Headbitch	
7. Carbons	
8. Trilobites	
9. White Dwarf	
10. Discovery	

2 Press [▲, ▼] to select the track and press [ENTER].

- Press [SHIFT]+[ANGLE/PAGE] to skip page by page.
- Press [FUNCTIONS] to show the playback condition and current position.

To exit the screen

Press [TOP MENU] or [MENU].

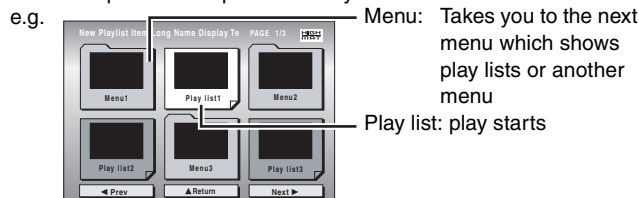
Playing HighMAT™ discs

WMA MP3 JPEG

1 Press [TOP MENU].

2 Press [▲, ▼, ◀, ▶] to select the item, then press [ENTER].

- Repeat this step if necessary.



- To change the menu background

Press [FUNCTIONS].

The background changes to the one recorded on the disc.

- To exit the screen

Press [■].

Selecting from the list

1 During play Press [MENU].



2 Press [◀] then [▲, ▼] to switch among "Playlist", "Group" and "Content" lists.

3 Press [▶] then [▲, ▼] to select an item and press [ENTER].

- Press [SHIFT]+[ANGLE/PAGE] to skip page by page.

- To exit the screen

Press [MENU].

Playing RAM/DVD-RW (DVD-VR) discs

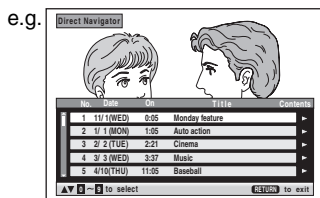
RAM DVD-RW (VR)

- Titles appear only if the titles are recorded on the disc.

- You cannot edit programs, play lists and disc titles.

Playing the programs

1 Press [DIRECT NAVIGATOR].



- To exit the screen

Press [DIRECT NAVIGATOR].

2 Press [▲, ▼] or the numbered buttons to select the program.

- Press [SHIFT]+[ANGLE/PAGE] to skip page by page.

- To select a 2-digit number

e.g. 23: [≥10] → [2] → [3]

- Press [▶] to show the contents of the program and the disc.

3 Press [ENTER].

Playing a play list

(Only when the disc contains a play list)

1 Press [PLAYLIST].



- To exit the screen

Press [PLAYLIST].

2 Press [▲, ▼] or the numbered buttons to select the play list.

- Press [SHIFT]+[ANGLE/PAGE] to skip page by page.

- To select a 2-digit number

e.g. 23: [≥10] → [2] → [3]

3 Press [ENTER].

Playing scenes one by one

1 While the play list menu is displayed

Press [▶].

2 Press [▲, ▼] to select "Scene List" and press [ENTER].

- "Contents" shows play list information.

3 Press [▲, ▼, ◀, ▶] to select a scene and press [ENTER].

Tips for making data discs

- When there are more than 8 groups, the eighth group onwards will be displayed on one vertical line in the menu screen.

- There may be differences in the display order on the menu screen and computer screen.

- This unit cannot play files recorded using packet write.

DVD-RAM

- Discs must conform to UDF 2.0.

CD-R/RW

- Discs must conform to ISO9660 level 1 or 2 (except for extended formats).

- This unit supports multi-session but if there are a lot of sessions it takes more time for play to start. Keep the number of sessions to a minimum to avoid this.

DVD-R/RW

- Discs must conform to UDF bridge (UDF 1.02/ISO9660).

- This unit does not support multi-session. The default session only is played.

Naming folders and files

(Files are treated as contents and folders are treated as groups on this unit.)

At the time of recording, prefix folder and file names. This should be with numbers that have an equal number of digits, and should be done in the order you want to play them (this may not work at times). Files must have the extension (→ below).

WMA (Extension: ".WMA" or ".wma")

- Compatible compression rate: between 48 kbps and 320 kbps
- You cannot play WMA files that are copy protected.

- This unit does not support Multiple Bit Rate (MBR).

MP3 (Extension: ".MP3" or ".mp3")

- Compatible compression rate: between 32 kbps and 320 kbps
- This unit does not support ID3 tags.
- Compatible sampling rates: 8, 11.02, 12, 16, 22.05, 24, 32, 44.1 and 48 kHz.

JPEG (Extension: ".JPG", ".jpg", ".JPEG" or ".jpeg")

- To view JPEG files on this unit:

- Take them on a digital camera that meets the DCF Standard (Design rule for Camera File system) Version 1.0. Some digital cameras have functions that are not supported by the DCF Standard Version 1.0 like automatic picture rotation which may render a picture unviewable.
- Do not alter the files in any way or save them under a different name.

- This unit cannot display moving pictures, MOTION JPEG and other such formats, still pictures other than JPEG (e.g. TIFF) or play pictures with attached audio.

MPEG4 (Extension: ".ASF" or ".asf")

- You can play MPEG4 data [conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system] recorded with Panasonic SD multi cameras or DVD video recorders with this unit.

- The recording date may differ from that of the actual date.

DivX (Extension: ".DIVX", ".divx", ".AVI" or ".avi")

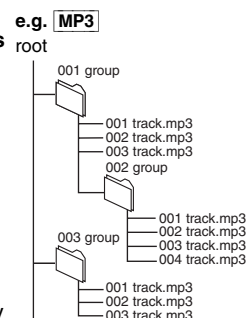
- You can play DivX data created using ver.3.11, 4.x, 5.x [DivX video system/MP3, Dolby Digital or MPEG audio system].

- GMC (Global Motion Compensation) is not supported.

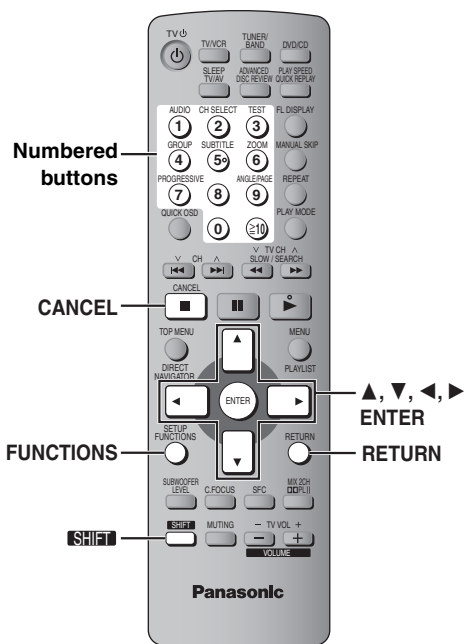
- DivX files greater than 2GB or have no index may not be played properly on this unit.

- This unit supports all resolutions up to maximum of 720 × 480 (NTSC)/720 × 576 (PAL).

- You can select up to 8 types of audio and subtitles on this unit.



Using on-screen menus



Items shown differ depending on the type of disc.

Main menu

Program Group	To start from a specific item
Title	
Chapter	
Track	
Playlist	
Content	
Time * Except +R/+RW	<p>To skip incrementally or decrementally* (Time Slip for play only)</p> <ol style="list-style-type: none"> 1 Press [ENTER] twice to show the Time Slip indicator. 2 Press [\blacktriangle, \blacktriangledown] to select the time and press [ENTER]. <p>• Press and hold [\blacktriangle, \blacktriangledown] to alter faster.</p> <p>To start from a specific time* (Time Search) To change remaining/elapsed time display</p>
Video	<p>MPEG4 DivX</p> <p>To display pixel number</p> <p>DivX fps (frame per second) is also displayed.</p>
Audio	<p>(→ page 12, Changing soundtracks)</p> <p>WMA MP3</p> <p>To display the current disc type</p>
Still Picture	To switch still pictures
Thumbnail	To show thumbnail images
Subtitle	(→ page 13, Changing subtitles)
Marker (VR)	<p>RAM DVD-RW (VR)</p> <p>To recall a marker recorded on DVD-Video recorders</p> <p>To recall a marker: Press [\blacktriangle, \blacktriangledown] → Press [ENTER]</p>
Angle	<p>(with multiple angles)</p> <p>To select the angle</p>
Rotate Picture	To rotate picture
Slideshow	<p>To turn on/off slideshow</p> <p>To change the slideshow timing (0–30 sec)</p>
Other Settings	(→ page 17)

1	<p>SETUP FUNCTIONS</p>	Press once.
2	<p>Select</p> <p>Return to the previous menu</p>	Select the menu.
3	<p>Select</p> <p>Register</p> <p>1 2 3 4 5 6 7 8 9 0 ≥10</p>	Make the settings.
4	<p>SETUP FUNCTIONS</p>	Press to exit.

Other Settings

Play Speed	DVD-A (Motion picture part) RAM DVD-RW (VR) DVD-V To change play speed – from “x0.6” to “x1.4” (in 0.1 unit steps)
-------------------	---

■ Play Menu

(Only when the elapsed play time can be displayed.)

JPEG: Works with all JPEG content.)

Repeat	(→ page 13, Repeat play)
A-B Repeat	Except JPEG RAM DVD-RW (VR) (Still picture part) MPEG4 DivX To repeat a specified section Press [ENTER] at the starting and ending points. Press [ENTER] again to cancel.
Marker	Except RAM DVD-RW (VR) To mark up to 5 positions to play again Press [ENTER] (The unit is now ready to accept markers.) To mark a position: Press [ENTER] (at the desired point) To mark another position: Press [◀, ▶] to select “*” → Press [ENTER] To recall a marker: Press [◀, ▶] → Press [ENTER] To erase a marker: Press [◀, ▶] → Press [SHIFT]+[CANCEL] • This feature does not work during program and random play.
Advanced Disc Review	(→ page 12, Reviewing titles to play (ADVANCED DISC REVIEW))

■ Picture Menu

Picture Mode	Normal Cinema1 : Mellows images and enhances detail in dark scenes. Cinema2 : Sharpens images and enhances detail in dark scenes. Animation, Dynamic User (Press [ENTER] to select “Picture Adjustment”) (→ below) Picture Adjustment Contrast, Brightness, Sharpness, Colour Gamma : Adjusts the brightness of dark parts. Depth Enhancer Reduces the rough noise in the background to give a greater feeling of depth.
Video Output Mode	625i* (or 525i*) (Interlace) ↔ 625p* (or 525p*) (Progressive) When you select “625p” or “525p”, a confirmation screen appears. Select “Yes” only if connecting to a progressive output compatible television. *The number displayed depends on the disc being played or “Picture/Video Output” setting (→ page 19).
Transfer Mode	If you have chosen “625p” or “525p” (→ above), select the method of conversion for video output to suit the type of material. When you play PAL discs, MPEG4 or DivX video contents Auto : Detects 25 frame-per-second film content and appropriately converts it. Video : Select when using Auto, and the video content is distorted. When you play NTSC discs Auto1 (normal): Detects 24 frame-per-second film content and appropriately converts it. Auto2 : Compatible with 30 frame-per-second film content in addition to 24 frame-per-second film content. Video : Select when using Auto1 or Auto2, and the video content is distorted.
Source Select DivX	When you select “Auto”, the constructing method of the DivX contents is automatically distinguished and output. If the picture is distorted, select “I (Interlace)” or “P (Progressive)” depending on which constructing method was used when the contents were recorded to disc. Auto, I (Interlace), P (Progressive)

■ Audio Menu

Dolby Pro Logic II	(→ page 22, Dolby Pro Logic II)
Dialogue Enhancer	To make the dialogue in movies easier to hear DVD-V (Dolby Digital, DTS, MPEG, 3-channel or higher, with the dialogue recorded in the center channel) DivX (Dolby Digital, 3-channel or higher, with the dialogue recorded in the center channel) On ↔ Off
Sound Enhancement	Except MPEG4 DivX Enhances audio output to produce a warm hall-like sound. On ↔ Off

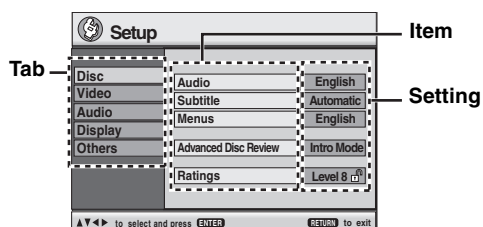
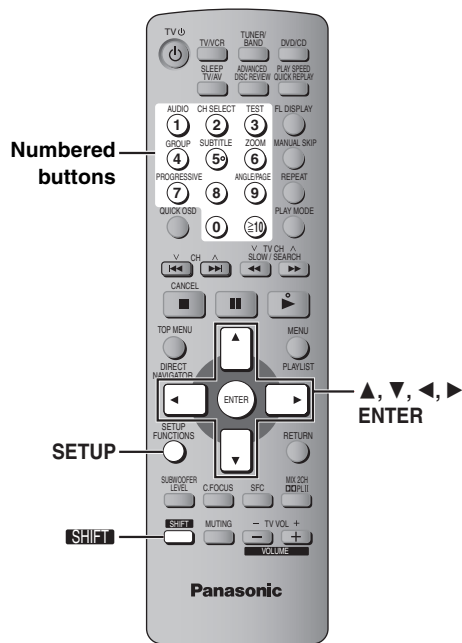
■ Display Menu

Information	On ↔ Off
Subtitle Position	0 to –60 (in 2 unit steps)
Subtitle Brightness	Auto, 0 to –7
4:3 Aspect	To select how to show images made for 4:3 aspect screens on a 16:9 aspect television Normal : Horizontally stretches images. Auto : Expands 4:3 letterbox images to fill more of the screen. Other images appear in full in the center of the screen. Shrink : Images appear in the center of the screen. Zoom : Expands all images to fill the screen. If your television has a similar feature, use it instead for a better effect.
Just Fit Zoom	To select the appropriate screen size to fit your TV screen
Manual Zoom	To zoom in and out manually
Bit Rate Display	DVD-A (Motion picture part) RAM DVD-RW (VR) DVD-V VCD MPEG4 DivX On ↔ Off
GUI See-through	Off, On, Auto
GUI Brightness	–3 to +3
Quick OSD	To display current playback condition Off, Basics, Details After registering the item, press [RETURN] to show the QUICK OSD screen (→ page 12).

■ Other Menu

Setup	(→ page 18)
Play as DVD-Video or Play as DVD-Audio	Select “Play as DVD-Video” to play DVD-Video contents of DVD-Audio.
Play as DVD-VR, Play as HighMAT or Play as Data Disc	Select “Play as Data Disc” to play JPEG, MPEG4 or DivX video contents on DVD-RAM or to play a HighMAT disc without using the HighMAT function.

Changing the player settings



- The settings remain intact even if you switch the unit to standby.
- Underlined items are the factory preset in the following diagram.

1	SHIFT + SETUP FUNCTIONS	Show the Setup menu. If you have not set QUICK SETUP (→ page 8), the QUICK SETUP screen appears.
2	Select Go right	Select the tab.
3	Select Register	Select the item.
4	Select Register	Make the settings.
5	SHIFT + SETUP FUNCTIONS	Press to exit.

QUICK SETUP enables successive settings of the items in the shaded area.

■ “Disc” tab



Audio Choose the audio language.	<ul style="list-style-type: none"> English Russian 	<ul style="list-style-type: none"> French Dutch 	<ul style="list-style-type: none"> German Original^{*1} 	<ul style="list-style-type: none"> Italian Other^{*2} 	<ul style="list-style-type: none"> Spanish 	<ul style="list-style-type: none"> Portuguese
Subtitle Choose the subtitle language.	<ul style="list-style-type: none"> Automatic^{*3} Portuguese 	<ul style="list-style-type: none"> English Russian 	<ul style="list-style-type: none"> French Dutch 	<ul style="list-style-type: none"> German Other^{*2} 	<ul style="list-style-type: none"> Italian 	<ul style="list-style-type: none"> Spanish
Menus Choose the language for disc menus. Changing the menu language in QUICK SETUP also changes this setting.	<ul style="list-style-type: none"> English Russian 	<ul style="list-style-type: none"> French Dutch 	<ul style="list-style-type: none"> German Other^{*2} 	<ul style="list-style-type: none"> Italian 	<ul style="list-style-type: none"> Spanish 	<ul style="list-style-type: none"> Portuguese
Advanced Disc Review (→ page 12)	<ul style="list-style-type: none"> Intro Mode: Reviews each title/program. Interval Mode: Reviews not only each title/program but also each 10 minute interval within a title/program. 					
Ratings Set a ratings level to limit DVD-Video play.	Setting ratings (When level 8 is selected) <ul style="list-style-type: none"> 8 No Limit 1 to 7 0 Lock All: To prevent play of discs without ratings levels. When you select your ratings, a password screen is shown. Follow the on-screen instructions. Do not forget your password. A message screen will be shown if a DVD-Video exceeding the ratings level is inserted in the unit. Enter your password and then follow the on-screen instructions.					

^{*1} The original language designated on the disc is selected.

^{*2} Input a code number referring to the table on page 28.

^{*3} If the language selected for “Audio” is not available, subtitles appear in that language (if available on the disc).

■ “Video” tab

TV Aspect Choose the setting to suit your television and preference.	<ul style="list-style-type: none"> 4:3 Pan&Scan: Regular aspect television (4:3) The sides of the widescreen picture are cut off so it fills the screen (unless prohibited by the disc). 4:3 Letterbox: Regular aspect television (4:3) Widescreen picture is shown in the letterbox style. 16:9: Widescreen television (16:9) 	 
TV Type Select to suit the type of television.	<ul style="list-style-type: none"> Standard (Direct View TV) Projection TV 	<ul style="list-style-type: none"> CRT Projector Plasma TV LCD TV/Projector
Time Delay When connected with a Plasma display, adjust if you notice the audio is out of sync with the video.	<ul style="list-style-type: none"> 0ms 20ms 40ms 60ms 80ms 100ms 	

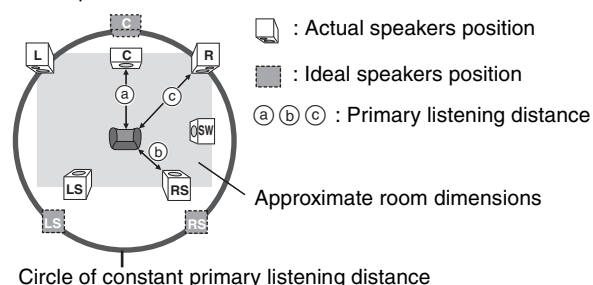
Still Mode Specify the type of picture shown when paused.	<ul style="list-style-type: none"> • <u>Automatic</u> • <u>Field</u>: The picture is not blurred, but picture quality is lower. • <u>Frame</u>: Overall quality is high, but the picture may appear blurred.
NTSC Disc Output Choose PAL 60 or NTSC output when playing NTSC discs (→ page 9, Video systems)	<ul style="list-style-type: none"> • <u>PAL60</u>: When connected to a PAL television. • <u>NTSC</u>: When connected to an NTSC television.
Picture/Video Output Change the video signal format to be output for JPEG, MPEG4 and DivX video if picture output is not smooth during playback.	<ul style="list-style-type: none"> • <u>Automatic</u> • <u>PAL</u> • <u>NTSC/PAL60</u>: Output will depend on “NTSC Disc Output” setting (→ above).
■ “Audio” tab	
Dynamic Range Compression	<ul style="list-style-type: none"> • <u>Off</u> • <u>On</u>: Adjusts for clarity even when the volume is low by compressing the range of the lowest sound level and the highest sound level. Convenient for late night viewing. (Only works with Dolby Digital)
Speaker Settings (→ below) Set the delay time for your center and surround speakers.	<ul style="list-style-type: none"> • <u>Center</u>: 0.0/1.0/2.0/3.0/4.0/5.0 ms • <u>Surround (L/R)</u>: 0.0/5.0/10.0/15.0 ms
■ “Display” tab	
Menu Language	<ul style="list-style-type: none"> • <u>English</u> • <u>Français</u> • <u>Deutsch</u> • <u>Italiano</u> • <u>Español</u> • <u>Português</u> • <u>Русский</u> • <u>Nederlands</u>
On-Screen Messages	<ul style="list-style-type: none"> • <u>On</u> • <u>Off</u>
Background during Play Select background during JPEG, MPEG4 and DivX video playback.	<ul style="list-style-type: none"> • <u>Black</u> • <u>Grey</u>
■ “Others” tab	
FL Dimmer Changes the brightness of the unit's display.	<ul style="list-style-type: none"> • <u>Bright</u> • <u>Dim</u> • <u>Auto</u>: The display is dimmed, but brightens when you perform some operations.
DivX Registration Displays the unit's registration code.	You need this registration code to purchase and play DivX Video-on-Demand (VOD) content. (→ page 27, About DivX VOD content)
QUICK SETUP	<ul style="list-style-type: none"> • <u>Yes</u> • <u>No</u>
Re-initialise Setting This returns all values in the Setup menus to the default settings.	<ul style="list-style-type: none"> • <u>Yes</u>: The password screen is shown if “Ratings” (→ page 18) is set. Please enter the same password. After “INIT” on the display disappears, turn the unit off and on again. • <u>No</u>

Changing the delay time (Speaker Settings)

(Effective when playing multi-channel audio)

(Center and surround speakers only)

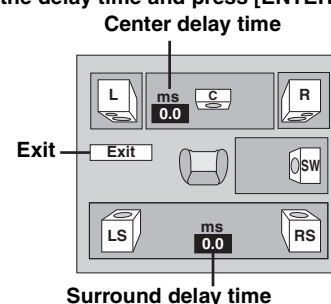
For optimum listening with 5.1-channel sound, all the speakers, except for the subwoofer, should be the same distance from the seating position. If you have to place the center or surround speakers closer to the seating position, adjust the delay time to make up for the difference.



If either distance (a) or (b) is less than (c), find the difference in the table and change to the recommended setting.

① Center speaker		② Surround speaker	
Difference (Approx.)	Setting	Difference (Approx.)	Setting
30 cm	1.0 ms	150 cm	5.0 ms
60 cm	2.0 ms	300 cm	10.0 ms
90 cm	3.0 ms	450 cm	15.0 ms
120 cm	4.0 ms		
150 cm	5.0 ms		

- 1 Press [▲, ▼] to select the delay time box and press [ENTER].
- 2 Press [▲, ▼] to adjust the delay time and press [ENTER].



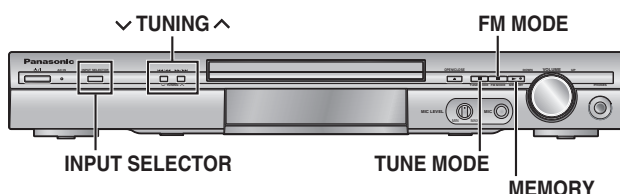
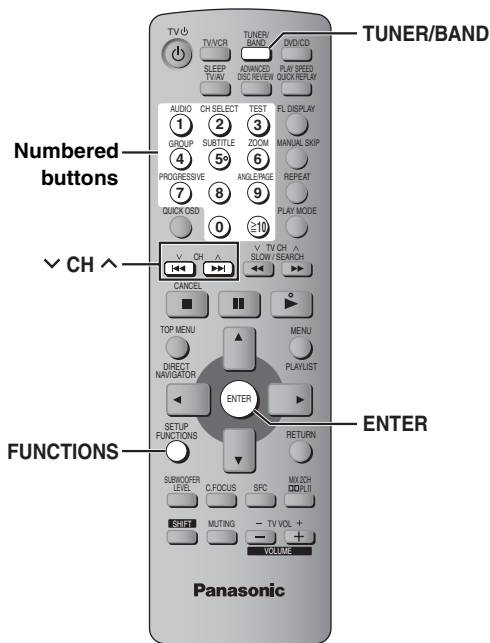
To finish the speaker setting

Press [◀] to select “Exit” and press [ENTER].

When you change the surround speaker setting for Dolby Digital, the setting also changes for Dolby Pro Logic II.

e.g., the settings for MUSIC are the same as those for Dolby Digital.

Dolby Digital	Dolby Pro Logic II	
	MUSIC	MOVIE
0 ms	0 ms	10 ms
5 ms	5 ms	15 ms
10 ms	10 ms	20 ms
15 ms	15 ms	25 ms



Automatic presetting

Main unit only

Up to 15 stations can be set in each band, FM and AM.

- 1** Press [INPUT SELECTOR] to select “FM” or “AM”.
- 2** Press [TUNE MODE] to select “MANUAL”.
Each time you press the button: MANUAL ↔ PRESET
- 3** Press [∇ TUNING ▲] to tune to the lowest frequency (FM: 87.50, AM: 522 or 520).
- 4** Press and hold [MEMORY].

Release the button when “FM AUTO” or “AM AUTO” is displayed.

The tuner presets all the stations it can receive into the channels in ascending order.

- “SET OK” is displayed when the stations are set, and the radio tunes to the last preset station.
- “ERROR” is displayed when automatic presetting is unsuccessful. Preset the channels manually (→ right).

Selecting the preset channels

- 1** Press [TUNER/BAND] to select “FM” or “AM”.
- 2** Press the numbered buttons to select the channel.

Alternatively, press [∇ CH ▲].

To select a 2-digit number

e.g. 12: [≥10] → [1] → [2]



When a stereo FM broadcast is being received.



■ If noise is excessive

When “FM” is selected

Press [FM MODE] on the main unit to display “MONO”.

e.g. FM:



Press [FM MODE] again to cancel the mode.

- FM mode is also canceled when you change the frequency.

When “AM” is selected

Press [FUNCTIONS] on the remote control.

Each time you press the button: BP 2 ↔ BP 1

- The setting is recalled whenever “AM” is selected.

Manual tuning

Main unit only

- 1** Press [INPUT SELECTOR] to select “FM” or “AM”.
- 2** Press [TUNE MODE] to select “MANUAL”.
- 3** Press [∇ TUNING ▲] to select the frequency.

Press and hold [∇ TUNING ▲] until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

■ Presetting the channel

Up to 15 stations can be set in each band, FM and AM.

- 1** While listening to the radio broadcast
Press [ENTER].
- 2** While the frequency and “PGM” are flashing on the display
Press the numbered buttons to select a channel.
Alternatively, press [∇ CH ▲], then press [ENTER].
• To select a 2-digit number
e.g. 12: [≥10] → [1] → [2].



The station occupying a channel is erased if another station is preset to that channel.

■ AM frequency step

Main unit only

The step is factory-set to 9 kHz, but you can change it to receive broadcasts allocated in 10-kHz steps.

- 1 Press [INPUT SELECTOR] to select "FM".
- 2 Press and hold [INPUT SELECTOR].
After a few seconds, the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed.
To return to the original step, repeat the above steps.

Note

After changing the setting, previously preset frequencies will be cleared.

Optional antenna connections

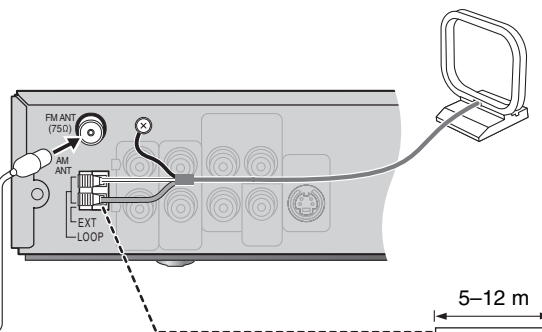
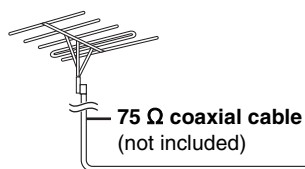
Use outdoor antennas if radio reception is poor.

- Disconnect the antenna when the unit is not in use.
- Do not use the outdoor antenna during an electrical storm.

Leave the AM loop antenna connected.

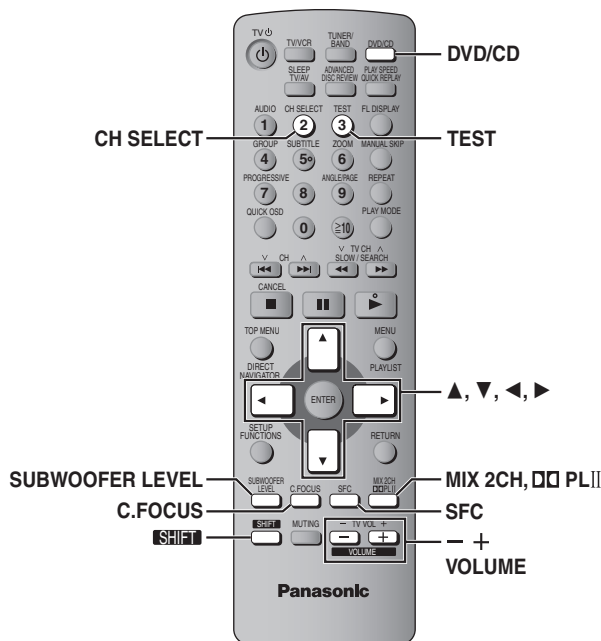
FM outdoor antenna (Using a television antenna)

- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.



AM outdoor antenna (Using a vinyl wire)

Run a piece of vinyl wire horizontally across a window or other convenient location.



Note

- When connected with headphones, the following sound field systems have no effect. (Excluding Sound Field Control)
- You may experience a reduction in sound quality when these sound field systems are used with some sources. If this occurs, turn the sound field system off.
- The following functions may not work depending on the disc's recording.



Changes the sound quality.

Press [SFC].

Each time you press the button:

FLAT: Cancel (no effect is added) (factory preset).

HEAVY: Adds punch to rock.

CLEAR: Clarifies higher sounds.

SOFT: For background music.

To check the current setting

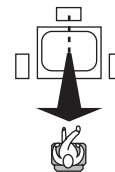
Press [SFC].



(Discs where the dialogue is recorded in the center channel)

You can make the sound of the center speaker seem like it is coming from within the television.

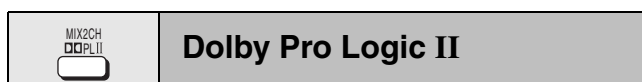
Press [C.FOCUS].



Each time you press the button:

C FOCUS ON \longleftrightarrow C FOCUS OFF

- This also works when Dolby Pro Logic II is turned on.



Except **DivX**

Dolby Pro Logic II is an advanced decoder that derives 5-channel surround (Left and Right Front, Center, Left and Right Surround) from any stereo program material, whether or not it has been specifically Dolby Surround encoded.

Press [**PL II**].



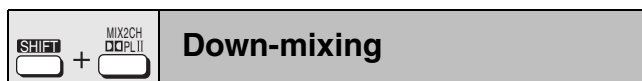
Each time you press the button:

MOVIE: Movie software, recorded in Dolby Surround.

MUSIC: Stereo sources

OFF: Cancel

- This works only in DVD/CD mode.
- "PL II" lights when there is effect.



You can output the down-mixed 2 channel signals when necessary.

Press [**SHIFT**]+[**MIX2CH**].



Each time you press the button:

MIX 2CH ON \longleftrightarrow MIX 2CH OFF

When "D.MIX" flashes on the display, the disc contains multiple-channel signals that cannot be down-mixed. **DVD-A**

Subwoofer level

You can adjust the amount of bass. The unit automatically selects the most suitable setting according to the type of playing source.

Press [SUBWOOFER LEVEL].

● **DVD-V** **RAM** **DVD-RW (VR)**

SUB W 4 (factory preset) → SUB W 1 → SUB W 2 → SUB W 3

● **When another source is selected**

SUB W 2 (factory preset) → SUB W 3 → SUB W 4 → SUB W 1



The setting you make is retained, and recalled every time you play the same type of source.

Speaker level adjustments

This is one of the ways to get appropriate surround effects.

Preparation

Press [DVD/CD].

1 While stopped and no on-screen display is shown

Press [SHIFT]+[TEST] to output a test signal.

L: Front left C: Center R: Front right
RS: Right surround LS: Left surround

● There is no output from SW (subwoofer) channel.

2 Press [VOLUME, +] or [–] to set the volume level normally used for listening.

3 Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

C, RS, LS: –6 dB to +6 dB

(L, R: Only the balance is adjustable.)

● **To adjust the balance of the front speakers**

While outputting the test signal, press [◀, ▶].

● Adjust the speaker level to the same level as the front speakers.

To stop the test signal

Press [SHIFT]+[TEST] again.

■ To adjust speaker level during play

(Effective when playing multi-channel audio or when Dolby Pro Logic II is on.)

1 Press [SHIFT]+[CH SELECT] to select the speaker.

L → C → R → RS → LS → SW

↑

SW: Subwoofer

● You can adjust SW only if the disc includes a subwoofer channel.

● "SW" does not appear on the display and is not adjustable when Dolby Pro Logic II is turned on.

2 Press [▲] (increase) or [▼] (decrease) to adjust the speaker level for each speaker.

C, RS, LS, SW: –6 dB to +6 dB

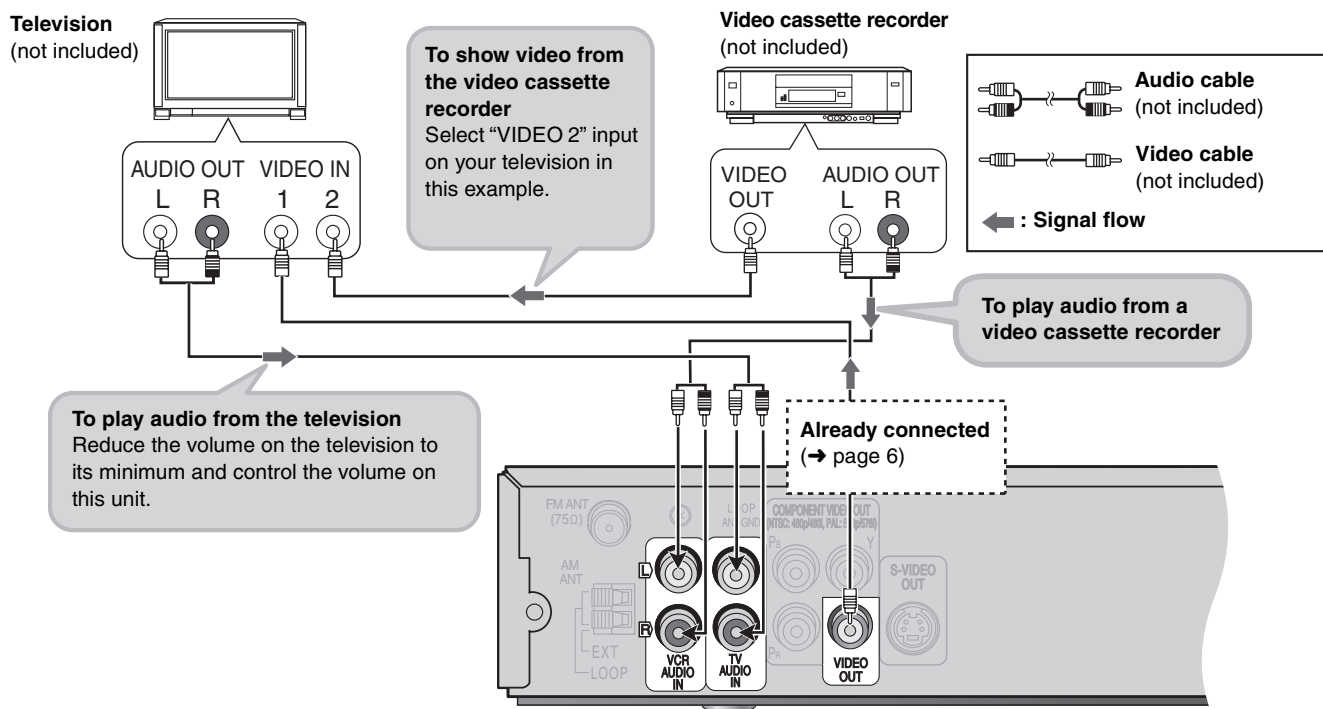
(L, R: Only the balance is adjustable.)

● **To adjust the balance of the front speakers**

While "L" or "R" is selected, press [◀, ▶].

Connecting other equipment

■ Connection example

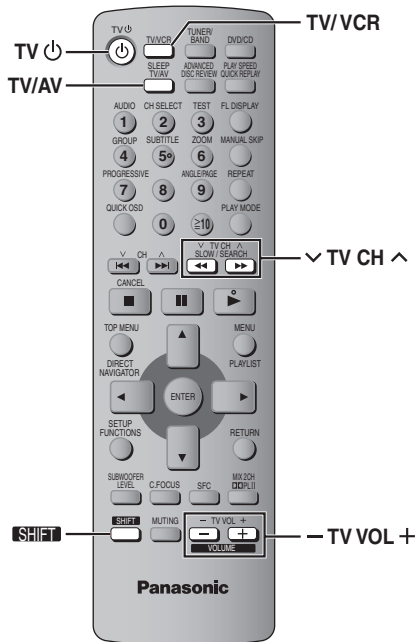


Operating the television

You can use the remote control to operate a Panasonic television. Connect your equipment referring to "Connection example" (→ above).

Note

The remote control may not work properly with some models.



Preparation

Aim the remote control at the unit and press [TV/VCR] once or twice until "TV" appears in the display, and then aim it at the television for the following operations:

Turning the television on/off

Press [SHIFT]+[TV ⏻].

Switching the television's video input mode

Press [TV/AV].

Changing channels

Press [SHIFT]+[v TV CH ^].

Adjusting the volume

Press [SHIFT]+[+ TV VOL +].

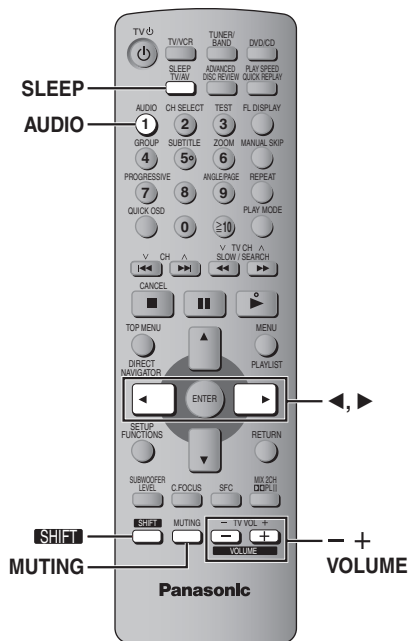
■ Enjoying your Home Theater Sound System with a video cassette recorder

- 1 Change the video input mode on the television ("VIDEO 2" in the example).
- 2 Aim the remote control at the unit and press [TV/VCR] once or twice until "VCR" appears in the display.
- 3 Operate the video cassette recorder using its remote control.

■ Connecting a laser disc or record player

Connect instead of a video cassette recorder (→ above) and select "VCR" as the source.

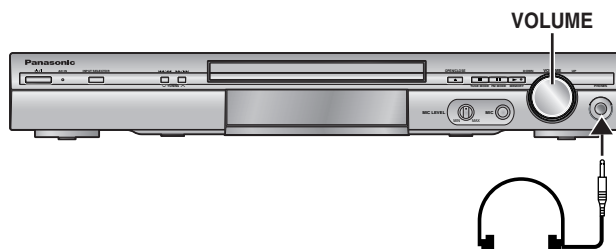
We recommend using a record player with a built-in phono equalizer. If your player doesn't have a built-in equalizer, connect it first to a separate equalizer and then to the unit.



Using headphones

Main unit only

- 1 Reduce the volume and connect the headphones (not included).
Headphone plug type: 3.5 mm stereo



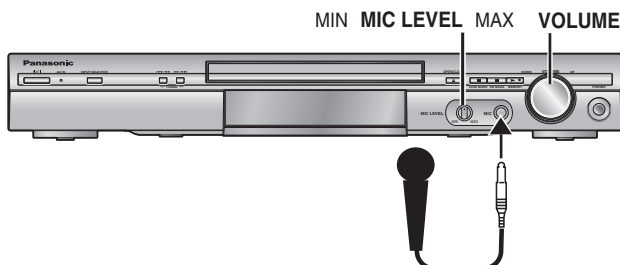
- 2 Adjust headphone volume with [VOLUME].
• Audio is automatically switched to stereo (2-channel).

Note

Avoid listening for prolonged periods of time to prevent hearing damage.

Enjoying Karaoke

- 1 Turn [MIC LEVEL] to "MIN" and connect the microphone (not included).
Microphone plug type: 6.3 mm monaural



- 2 Insert the disc and start play (→ page 10).
- 3 Adjust the main volume with [VOLUME].
- 4 Adjust the microphone volume.

To turn the vocals on and off

DVD-V

- 1 Press [SHIFT]+[AUDIO] during play.
- 2 Press [◀, ▶] to select the mode.

Solo discs
Off: Vocals off
On: Vocals on

Duet discs
Off: Vocals off
V1+V2: Both parts
V1: Part 1 only
V2: Part 2 only

VCD

Press [SHIFT]+[AUDIO] during play.

Each time you press the button:
LR: Vocals and accompaniment

L: Accompaniment only

R: Vocals only

Select "L" for karaoke. (R and L may be reversed on some discs.)

Sleep timer

Press [SHIFT]+[SLEEP] to select the time (in minutes).

SLEEP 30 → SLEEP 60 → SLEEP 90
↑ OFF ← SLEEP 120 ←



To cancel the timer

Press [SHIFT]+[SLEEP] to select "OFF".

To confirm the remaining time

Press [SHIFT]+[SLEEP] again.

To change the setting

Repeat the procedure from the beginning.

Muting

Press [MUTING].

"MUTING" flashes on the unit's display.



To cancel

• Press [MUTING] again or reduce the volume to minimum (— dB), then raise it to the required level.

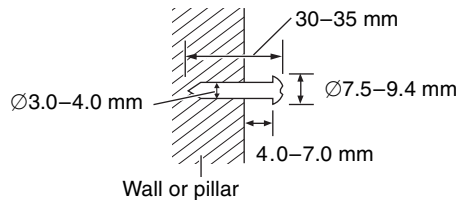
• Muting is canceled when you switch the unit to standby.

Other speaker setup options

■ Attaching to a wall

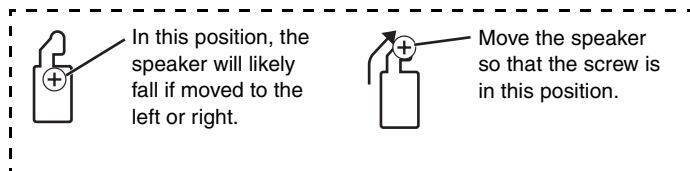
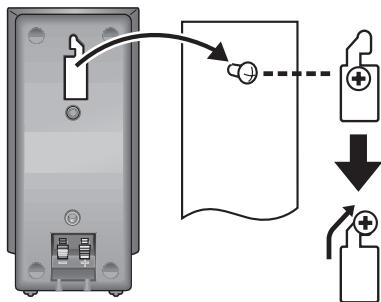
You can attach all of the speakers to a wall.

- ① Drive a screw (not included) into the wall.
- ② Fit the speaker securely onto the screw(s) with the hole(s).

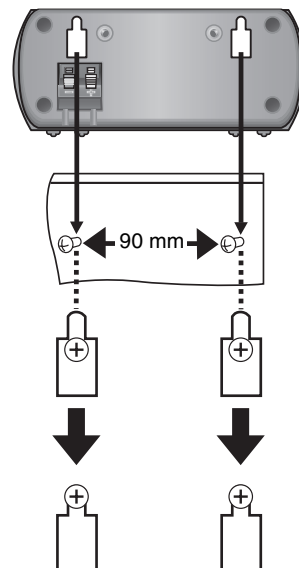


- The wall or pillar on which the speakers are to be attached should be capable of supporting 10 kg per screw. Consult a qualified building contractor when attaching the speakers to a wall. Improper attachment may result in damage to the wall and speakers.

Front and surround speakers



Center speaker



■ Fitting speaker stands (not included)

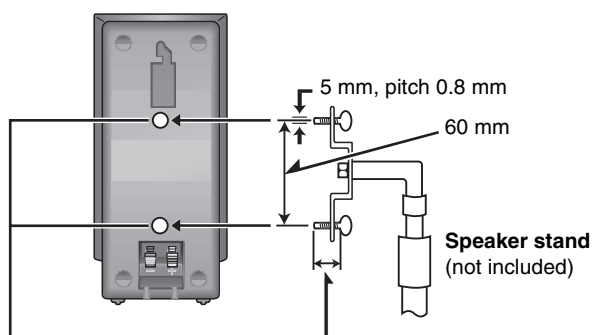
Ensure the stands meet these conditions before purchasing them.

Note the diameter and length of the screws and the distance between screws as shown in the diagram.

- The stands must be able to support over 10 kg.
- The stands must be stable even if the speakers are in a high position.

e.g.

Front and surround speakers



Attach the stands to these metal screw holes.

Plate thickness plus 7 mm to 10 mm

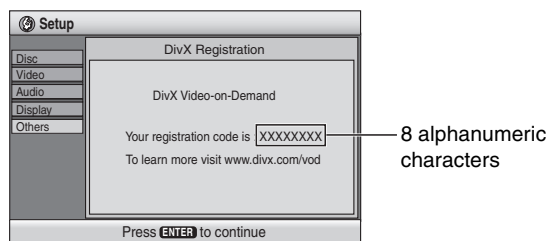
About DivX VOD content

DivX Video-on-Demand (VOD) content is encrypted for copyright protection. In order to play DivX VOD content on this unit, you first need to register the unit.

Follow the online instructions for purchasing DivX VOD content to enter the unit's registration code and register the unit. For more information about DivX VOD, visit www.divx.com/vod.

Display the unit's registration code

(→ page 19, "DivX Registration" in "Others" tab)



- We recommend that you make a note of this code for future reference.
- After playing DivX VOD content for the first time, another registration code is then displayed in "DivX Registration". Do not use this registration code to purchase DivX VOD content. If you use this code to purchase DivX VOD content, and then play the content on this unit, you will no longer be able to play any content that you purchased using the previous code.
- If you purchase DivX VOD content using a registration code different from this unit's code, you will not be able to play this content. ("Authorization Error" is displayed.)

Regarding DivX content that can only be played a set number of times

Some DivX VOD content can only be played a set number of times. When you play this content, the remaining number of plays is displayed. You cannot play this content when the number of remaining plays is zero. ("Rented Movie Expired" is displayed.)

When playing this content

- The number of remaining plays is reduced by one if
 - you turn off the unit or press [SHIFT]+[SETUP].
 - you press [■]. (Press [II] to pause play.)
 - you press [◀◀, ▶▶] or [◀◀, ▶▶] etc. and arrive at another content or the start of the content being played.
- Resume (→ page 11, Stop) and Marker (→ page 17, Play Menu) functions do not work.

Maintenance

Clean this unit with a soft, dry cloth.

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, carefully read the instructions that came with the cloth.

Do not use commercially available lens cleaners as they may cause malfunction. (Cleaning of the lens is generally not necessary although this depends on the operating environment.)

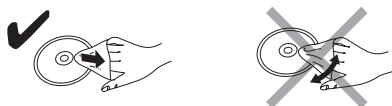
Before moving the unit, ensure the disc tray is empty.

Failure to do so will risk severely damaging the disc and the unit.

Disc handling

■ To clean discs

Wipe with a damp cloth and then wipe dry.



■ Disc handling precautions

- Do not attach labels or stickers to discs (This may cause disc warping, rendering it unusable).
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzene, thinner, static electricity prevention liquids or any other solvent.
- Do not use scratch-proof protectors or covers.
- Do not use the following discs:
 - Discs with exposed adhesive from removed stickers or labels (rented discs, etc.).
 - Discs that are badly warped or cracked.
 - Irregularly shaped discs, such as heart shapes.

Language code list

Abkhazian:	6566	Finnish:	7073	Macedonian:	7775	Somali:	8379
Afar:	6565	French:	7082	Malagasy:	7771	Spanish:	6983
Afrikaans:	6570	Frisian:	7089	Malay:	7783	Sundanese:	8385
Albanian:	8381	Galician:	7176	Malayalam:	7776	Swahili:	8387
Ameharic:	6577	Georgian:	7565	Maltese:	7784	Swedish:	8386
Arabic:	6582	German:	6869	Maori:	7773	Tagalog:	8476
Armenian:	7289	Greek:	6976	Marathi:	7782	Tajik:	8471
Assamese:	6583	Greenlandic:	7576	Moldavian:	7779	Tamil:	8465
Aymara:	6589	Guarani:	7178	Mongolian:	7778	Tatar:	8484
Azerbaijani:	6590	Gujarati:	7185	Nauru:	7865	Telugu:	8469
Bashkir:	6665	Hausa:	7265	Nepali:	7869	Thai:	8472
Basque:	6985	Hebrew:	7387	Norwegian:	7879	Tibetan:	6679
Bengali; Bangla:	6678	Hindi:	7273	Oriya:	7982	Tigrinya:	8473
Bhutani:	6890	Hungarian:	7285	Pashto, Pushto:	8083	Tonga:	8479
Bihari:	6672	Icelandic:	7383	Persian:	7065	Turkish:	8482
Breton:	6682	Indonesian:	7378	Polish:	8076	Turkmen:	8475
Bulgarian:	6671	Interlingua:	7365	Portuguese:	8084	Twi:	8487
Burmese:	7789	Irish:	7165	Punjabi:	8065	Ukrainian:	8575
Byelorussian:	6669	Italian:	7384	Quechua:	8185	Urdu:	8582
Cambodian:	7577	Japanese:	7465	Rhaeto-Romance:	8277	Uzbek:	8590
Catalan:	6765	Javanese:	7487	Romanian:	8279	Vietnamese:	8673
Chinese:	9072	Kannada:	7578	Russian:	8285	Volapük:	8679
Corsican:	6779	Kashmiri:	7583	Samoan:	8377	Welsh:	6789
Croatian:	7282	Kazakh:	7575	Sanskrit:	8365	Wolof:	8779
Czech:	6783	Kirghiz:	7589	Scots Gaelic:	7168	Xhosa:	8872
Danish:	6865	Korean:	7579	Serbian:	8382	Yiddish:	7473
Dutch:	7876	Kurdish:	7585	Serbo-Croatian:	8372	Yoruba:	8979
English:	6978	Laotian:	7679	Shona:	8378	Zulu:	9085
Esperanto:	6979	Latin:	7665	Sindhi:	8368		
Estonian:	6984	Latvian, Lettish:	7686	Singhalese:	8373		
Faroese:	7079	Lingala:	7678	Slovak:	8375		
Fiji:	7074	Lithuanian:	7684	Slovenian:	8376		

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AMPLIFIER SECTION

RMS Output Power: Dolby Digital Mode

Front Ch	65 W per channel (6 Ω), 1 kHz, 10 % THD
Surround Ch	65 W per channel (6 Ω), 1 kHz, 10 % THD
Center Ch	65 W per channel (6 Ω), 1 kHz, 10 % THD
Subwoofer Ch	75 W per channel (4 Ω), 100 Hz, 10 % THD
Total RMS Dolby Digital mode power	400 W

PMPO output power 3500 W

DIN Output Power: Dolby Digital Mode

Front Ch	55 W per channel (6 Ω), 1 kHz, 1 % THD
Surround Ch	55 W per channel (6 Ω), 1 kHz, 1 % THD
Center Ch	55 W per channel (6 Ω), 1 kHz, 1 % THD
Subwoofer Ch	65 W per channel (4 Ω), 100 Hz, 1 % THD
Total DIN Dolby Digital mode power	340 W

FM/AM TUNER, TERMINALS SECTION

Preset station FM 15 stations
AM/MW 15 stations

Frequency Modulation (FM)

Frequency range	87.50–108.00 MHz (50-kHz step)
Sensitivity	2.5 μV (IHF)
S/N 26 dB	2.2 μV
Antenna terminals	75 Ω (unbalance)

Amplitude Modulation (AM/MW)

Frequency range	522–1629 kHz (9-kHz step) 520–1630 kHz (10-kHz step)
AM Sensitivity S/N 20 dB at 999 kHz	560 μV/m

Phone jack

Terminal Stereo, 3.5 mm jack

Mic jack

Sensitivity 0.7 mV, 1.2 kΩ
Terminal Mono, 6.3 mm jack (1 system)

DISC SECTION

Discs played (8 cm or 12 cm)

- (1) DVD (DVD-Video, DVD-Audio, DivX^{*1,2})
- (2) DVD-RAM (DVD-VR, JPEG^{*2,3}, MPEG4^{*2,4}, DivX^{*1,2})
- (3) DVD-R (DVD-Video, DivX^{*1,2})
- (4) DVD-RW (DVD-Video, DVD-VR, DivX^{*1,2})
- (5) +R/+RW (Video)
- (6) CD, CD-R/RW [CD-DA, Video-CD, SVCD^{*5}, MP3^{*2,6}, WMA^{*2,7}, JPEG^{*2,3}, MPEG4^{*2,4}, DivX^{*1,2}, HighMAT Level 2 (Audio and Image)]

^{*1} DivX 3.11, 4.x, 5.x

GMC (Global Motion Compensation) is not supported.

^{*2} The total combined maximum number of recognizable audio, picture and video contents and groups: 4000 audio, picture and video contents and 400 groups.

^{*3} Exif Ver 2.1 JPEG Baseline files

Picture resolution: between 160×120 and 6144×4096 pixels (Sub sampling is 4:2:2 or 4:2:0)

^{*4} MPEG4 data recorded with Panasonic SD multi cameras or DVD video recorders

Conforming to SD VIDEO specifications (ASF standard)/MPEG4 (Simple Profile) video system/G.726 audio system

^{*5} Conforming to IEC62107

^{*6} MPEG-1 Layer 3, MPEG-2 Layer 3

^{*7} Windows Media Audio Ver. 9.0 L3

Not compatible with Multiple Bit Rate (MBR)

Pick up

Wavelength	CD 785 nm DVD 662 nm
Laser power	CLASS 2/CLASS 3A

Audio output (Disc)

Number of channels 5.1ch (FL, FR, C, SL, SR, SW)

VIDEO SECTION

Video system

Signal system PAL625/50, PAL525/60, NTSC

Composite video output

Output level 1 Vp-p (75 Ω)
Terminal Pin jack (1 system)

S-video output

Y output level 1 Vp-p (75 Ω)
C output level PAL; 0.3 Vp-p (75 Ω)
NTSC; 0.286 Vp-p (75 Ω)
Terminal S terminal (1 system)

Component video output

[NTSC: 525 (480) p/525 (480) i, PAL: 625 (576) p/625 (576) i]
Y output level 1 Vp-p (75 Ω)
P_B output level 0.7 Vp-p (75 Ω)
P_R output level 0.7 Vp-p (75 Ω)
Terminal Pin jack (Y: green, P_B: blue, P_R: red) (1 system)

SPEAKER SECTION

Front/Surround speakers SB-FS335

Type 1 way, 1 speaker system (Bass reflex)
Speaker unit(s) Impedance 6 Ω
Full range 6.5 cm Cone type
Input power (IEC) 70 W (Max)
Output sound pressure 80 dB/W (1.0 m)
Frequency range 88 Hz–25 kHz (–16 dB)
100 Hz–22 kHz (–10 dB)
90 mm×193 mm×105 mm
Mass 0.74 kg

Center speaker SB-PC335

Type 1 way, 1 speaker system (Bass reflex)
Speaker unit(s) Impedance 6 Ω
Full range 6.5 cm Cone type
Input power (IEC) 70 W (Max)
Output sound pressure 80 dB/W (1.0 m)
Frequency range 100 Hz–25 kHz (–16 dB)
113 Hz–22 kHz (–10 dB)
220 mm×88 mm×96 mm
Mass 0.72 kg

Subwoofer SB-W335

Type 1 way, 1 speaker system (Bass reflex)
Speaker unit(s) Impedance 4 Ω
Subwoofer 16 cm Cone type
Input power (IEC) 90 W (Max)
Output sound pressure 80 dB/W (1.0 m)
Frequency range 29 Hz–173 Hz (–16 dB)
33 Hz–148 Hz (–10 dB)
175 mm×345 mm×295 mm
Mass 3.3 kg

GENERAL

Power supply AC 110–240 V, 50/60 Hz
Power consumption Main unit 80 W
Dimensions (W×H×D) 430 mm×60 mm×337 mm
Mass Main unit 3.3 kg
Operating temperature range +5 °C to +35 °C
Operating humidity range 5 % to 90 % RH (no condensation)

Power consumption in standby mode approx. 0.5 W

Note

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Troubleshooting guide

Before requesting service, make the following checks. If you are in doubt about some of the check points, or if the solutions indicated in the chart do not solve the problem, consult your dealer for instructions.

Power

		Page
No power.	● Insert the AC mains lead securely.	7
The unit is automatically switched to the standby mode.	● The Sleep timer was working and had reached the set time limit.	25

Unresponsive or inoperable function

No response when any buttons are pressed.	<ul style="list-style-type: none"> ● This unit cannot play discs other than the ones listed in these operating instructions. ● The unit may not be operating properly due to lightning, static electricity or some other external factor. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it. ● Condensation has formed: Wait 1 to 2 hours for it to evaporate. 	9 —
No response when remote control buttons are pressed.	<ul style="list-style-type: none"> ● Check that the batteries are installed correctly. ● The batteries are depleted. Replace them with new ones. ● Aim the remote control at the display and operate. 	7 7 8
No picture or sound.	<ul style="list-style-type: none"> ● Check the video or audio connection. ● Check the power or input setting of the connected equipment. ● Check that the disc has something recorded on it. 	5, 6, 24 — —
You have forgotten your ratings password. Reset all the settings to Factory Preset.	<ul style="list-style-type: none"> ● While stopped and "DVD/CD" is the source, press and hold [■] on the main unit and [≥10] on the remote control until "Initialised" disappears from the television. Turn the unit off and on again. All settings will return to the default values. 	—

Specific operation undesirable or unexpected

It takes time before play starts.	<ul style="list-style-type: none"> ● Play may take time to begin when an MP3 track has still picture data. Even after the track starts, the correct play time will not be displayed. This is normal. ● This is normal on DivX video. 	— —
Folders deeper than the eighth layer on a data disc are not displayed correctly. WMA MP3 JPEG MPEG4 DivX	<ul style="list-style-type: none"> ● Folders deeper than the eighth layer are displayed as the eighth layer. 	—
A menu screen appears during skip or search. VCD	<ul style="list-style-type: none"> ● This is normal for Video CD's. 	—
Playback control menu doesn't appear. VCD with playback control	<ul style="list-style-type: none"> ● Press [■] twice and then press [▶] (play). 	—
The program and random play functions do not work. DVD-V	<ul style="list-style-type: none"> ● These functions do not work with some DVD-Videos. 	—
Programmed items are not played. DVD-V	<ul style="list-style-type: none"> ● Some items cannot be played even if you have programmed them. 	—
The on-screen menu shows "2" as a soundtrack option when [SHIFT]+[AUDIO] is pressed, but the audio does not change. DVD-A	<ul style="list-style-type: none"> ● Even if a second soundtrack isn't recorded, two numbers will normally be shown. 	—
Play doesn't start.	<ul style="list-style-type: none"> ● This unit may not play WMA and MPEG4 that contains still picture data. ● If playing DivX VOD content, refer to the homepage where you purchased the DivX VOD content. (Example: www.divx.com/vod) DivX ● If a disc contains CD-DA and other formats, proper playback may not be possible. 	— — —
Play restarts from the beginning of the track when soundtrack is changed. DVD-A	<ul style="list-style-type: none"> ● This is normal on DVD-Audio. 	—
Scenes are skipped intermittently. RAM DVD-RW (VR) DVD-V	<ul style="list-style-type: none"> ● If you change the volume or sound field/quality setting during ADVANCED DISC REVIEW, the function continues without the on-screen display. Press [ADVANCED DISC REVIEW] again to cancel the function. 	12

Subtitle

Subtitle position is wrong.	<ul style="list-style-type: none"> ● Adjust the position. ("Subtitle Position" in Display Menu) 	17
No subtitles.	<ul style="list-style-type: none"> ● Display the subtitles. ● Subtitles may not be displayed depending on the disc. DivX 	13 —

Marker

Cannot add markers.	<ul style="list-style-type: none"> ● You cannot add markers. RAM DVD-RW (VR) ● If the disc's elapsed play time doesn't appear on the unit's display, you cannot add markers. 	— —
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A-B Repeat

Point B is automatically set.	<ul style="list-style-type: none"> ● The end of an item becomes point B when it is reached. 	—
A-B Repeat is automatically canceled.	<ul style="list-style-type: none"> ● A-B Repeat is canceled when you press [QUICK REPLAY]. 	—

Sound abnormal or improper

Sound distorted.	<ul style="list-style-type: none"> ● Noise may occur when playing WMA. 	—
Effects do not work.	<ul style="list-style-type: none"> ● Some audio effects do not work or have less effect with some discs. ● Dolby Pro Logic II does not work if you have changed the play speed. 	— —
Humming is heard during play.	<ul style="list-style-type: none"> ● An AC mains lead or fluorescent light is near the cables. Keep other appliances and cords away from this unit's cables. 	—
No sound	<ul style="list-style-type: none"> ● There may be a pause in sound when you change the play speed. ● Audio may not be output due to how files were created. DivX 	— 15

Menus

The Setup menu cannot be accessed.	<ul style="list-style-type: none"> ● Select "DVD/CD" as the source. ● Cancel all group, program and random play. 	— 13
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Picture abnormal or unviewable

Page

Picture distorted.	<ul style="list-style-type: none"> Ensure that the unit is connected directly to the television, and is not connected through a video cassette recorder. Change "Source Select" in Picture Menu. DivX 	6 17
Picture size doesn't fit the screen.	<ul style="list-style-type: none"> Change "TV Aspect" in the "Video" tab. Use the television to change the aspect. If your television does not have that function, change "4:3 Aspect" in Display Menu. Change the Zoom setting. 	18 17 12
Picture stops. DivX	<ul style="list-style-type: none"> Picture may stop if the DivX files are greater than 2GB. 	—
The television may display incorrectly or colors appear faded.	<ul style="list-style-type: none"> The unit and television are using different video systems. Use a multi-system or PAL television. The system used on the disc does not match your television. <ul style="list-style-type: none"> PAL discs cannot be correctly viewed on an NTSC television. This unit can convert NTSC signals to PAL 60 for viewing on a PAL television ("NTSC Disc Output" in "Video" tab). 	— 19
Menu is not displayed correctly.	<ul style="list-style-type: none"> Restore the zoom ratio to "× 1.00". Set "Subtitle Position" in Display Menu to "0". Set "4:3 Aspect" in Display Menu to "Normal". 	12 17 17
Auto zoom function does not work well.	<ul style="list-style-type: none"> Turn off TV's zoom function. Use the other preset aspect ratios or manual adjustment. Zoom function may not work well, especially in dark scenes and may not work depending on the type of disc. 	— 12 —
The picture on the television disappears or stripes appear on the screen.	<ul style="list-style-type: none"> Mobile telephone chargers can cause some disturbance. If you are using a TV indoor antenna, change to an outdoor antenna. The television antenna wire is too close to the unit. Separate the antenna wire of the television from the unit. 	— — —

Progressive video

There is ghosting when progressive output is on.	<ul style="list-style-type: none"> This problem is caused by the editing method or material used on DVD-Video, but should be corrected if you use interlace output. Change "Video Output Mode" in Picture Menu to "625i" or "525i". 	17
Pictures not in progressive output.	<ul style="list-style-type: none"> Press [SHIFT] + [PROGRESSIVE] so "PRG" is displayed. Or select "625p" or "525p" in "Video Output Mode" in Picture Menu. If the unit is connected to the television through the VIDEO OUT or S-VIDEO OUT terminal, output will be interlace even if "PRG" is displayed. 	11, 17 6

Listening to the radio

Noise is heard. "ST" flickers or doesn't light. Sound is distorted.	<ul style="list-style-type: none"> Adjust the position of the FM or AM antenna. Use an outdoor antenna. 	— 21
A beat sound is heard.	<ul style="list-style-type: none"> Turn the television off or move it away from the unit. 	—
A low hum is heard during AM broadcasts.	<ul style="list-style-type: none"> Separate the antenna from other cables. 	—

Television operation

Cannot operate the TV.	<ul style="list-style-type: none"> To use functions labeled in orange, while pressing [SHIFT], press the corresponding button. 	—
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Unit displays

The display is dark.	<ul style="list-style-type: none"> Select "Bright" in "FL Dimmer" in the "Others" tab. 	19
"NO PLAY"	<ul style="list-style-type: none"> You inserted a disc the unit cannot play; insert one it can. You inserted a blank disc. 	9 —
"NO DISC"	<ul style="list-style-type: none"> You haven't inserted a disc; insert one. You haven't inserted the disc correctly; insert it correctly. 	— 10
"F61"	<ul style="list-style-type: none"> Check and correct the speaker cord connections. If this does not fix the problem, there is a power supply problem. Consult the dealer. 	5
"DVD U11"	<ul style="list-style-type: none"> Disc may be dirty. Wipe it clean. 	27
"ERROR"	<ul style="list-style-type: none"> Incorrect operation performed. Read the instructions and try again. 	—
"DVD H□□" □□ stands for a number.	<ul style="list-style-type: none"> Trouble may have occurred. The number following "H" depends on the status of the unit. Turn the unit off and then back to ON. Alternatively, turn the unit off, disconnect the AC mains lead, and then reconnect it. If the service numbers fail to clear, note the service number and contact a qualified service person. 	— —

Television displays

"⊘"	<ul style="list-style-type: none"> The operation is prohibited by the unit or disc. 	—
"Cannot play group xx, content xx"	<ul style="list-style-type: none"> You are trying to play an incompatible group or content. 	—
"Cannot display group xx, content xx"		
"Group xx, content xx is protected"	<ul style="list-style-type: none"> You are trying to play a protected group or content. You cannot play it. 	—
"Cannot play audio"	<ul style="list-style-type: none"> Audio has not been recorded, or recorded in a format this unit cannot playback. Video playback only is possible. 	15
"No audio"		
"Check the disc"	<ul style="list-style-type: none"> This disc may be dirty. 	27
"This disc may not be played in your region"	<ul style="list-style-type: none"> You can only play DVD-Video if their region number is the same or includes the same region number as the unit or if the DVD-Video is marked "ALL". Confirm the region number for the unit on the rear panel. 	Cover page
No on-screen display.	<ul style="list-style-type: none"> Select "On" in "On-Screen Messages" in the "Display" tab. 	19
"Authorization Error" DivX	<ul style="list-style-type: none"> You are trying to play the DivX VOD content that was purchased with a different registration code. You cannot play the content on this unit. 	27
"Rented Movie Expired" DivX	<ul style="list-style-type: none"> The DivX VOD content has zero remaining plays. You cannot play it. 	27

Accessories



Please check and identify the supplied accessories.

- ☐ **1 Remote control**
(N2QAJB000147)



- ☐ **1 AM loop antenna**



- ☐ **2 Sheets of speaker-cable stickers**



- ☐ **2 Remote control batteries**



- ☐ **1 FM indoor antenna**



- ☐ **Speaker cables**
3×short cables



2×long cables



- ☐ **1 Video cable**



- ☐ **1 AC mains lead**

